

حمل الآن

مجاناً وحصرياً

المراجعة رقم (1)

الترم الاول



1 Choose the correct answer from the following:

- 1 Which of the following represents 'Information'?
 - a. Raw facts
 - b. Something that carries meaning or value to the recipient
 - c. Unclear symbols
 - d. Only numbers
- 2 Knowledge means:
 - a. Copying information
 - b. Organizing and analyzing information to solve problems
 - c. Raw data
 - d. Rumors
- 3 Which of the following is an example of hardware?
 - a. Mouse
 - b. Word program
 - c. Operating System
 - d. Messaging application
- 4 What does the term "Hardware" refer to?
 - a. Software
 - b. Digital data
 - c. The hardware devices of the computer
 - d. Programing instructions
- 5 Which of the following is NOT a component of a Full Adder circuit?
 - a. AND
 - b. OR
 - c. XOR
 - d. NAND
- 6 What is the output of a NOT circuit if the input = 1?
 - a. 0
 - b. 1
 - c. 2
 - d. Nothing
- 7 System software is used to:
 - a. Operate and manage hardware
 - b. Create documents
 - c. Play video clips
 - d. Browse the internet
- 8 Which of the following is not system software?
 - a. Windows
 - b. macOS
 - c. Photoshop
 - d. Linux

- 9 What is the relationship between hardware and software?
- a. Hardware runs without software
 - b. Software runs on hardware to operate the computer
 - c. There is no relationship between them
 - d. Hardware is a part of software
- 10 Which of the following is considered application software?
- a. Word
 - b. Windows
 - c. BIOS
 - d. Linux
- 11 What controls the communication between hardware and software?
- a. The Operating System
 - b. The user
 - c. The input unit
 - d. The screen
- 12 What is meant by "System Software"?
- a. Programs used directly by the user
 - b. Programs that control the operation of hardware and other programs
 - c. Programs for designing images
 - d. Programs for browsing the web
- 13 What is meant by a Logical Operation?
- a. A calculation using decimal numbers
 - b. An operation performed using binary numbers 0 and 1
 - c. A graphical process for drawing circuits
 - d. A process of storing data in memory
- 14 A Logic Circuit is used for:
- a. Converting signals into images
 - b. Executing logical operations
 - c. Storing data
 - d. Sending data over the internet
- 15 Which of the following gates outputs (1) only when all inputs are (1)?
- a. OR
 - b. AND
 - c. NOT
 - d. XOR
- 16 Which of the following describes the Inverter (NOT) circuit?
- a. It outputs the same value as the input
 - b. It outputs the opposite of the input value
 - c. It outputs the sum of the inputs
 - d. It does not output any value



- 17 Which of the following describes the function of an OR gate?
- a. It outputs 1 only when all inputs are 1
 - b. It outputs 1 if at least one input is 1
 - c. It always outputs 0
 - d. It outputs 1 when the inputs are equal
- 18 A Truth Table is used for:
- a. Storing data
 - b. Showing the outputs for all possible input combinations
 - c. Drawing circuits
 - d. Translating programs
- 19 What is the output of an AND gate if the inputs are (1 and 0)?
- a. 0
 - b. 1
 - c. 2
 - d. Nothing
- 20 What is the function of a Half Adder circuit?
- a. Adding two decimal numbers
 - b. Adding two single-bit binary numbers
 - c. Subtracting two numbers
 - d. Converting one number to another
- 21 A Half Adder circuit consists of:
- a. An AND gate and an OR gate
 - b. An AND gate and a NOT gate
 - c. An AND gate and an XOR gate
 - d. An OR gate and a NOT gate
- 22 What is the difference between a Half Adder and a Full Adder?
- a. The Full Adder accounts for the Carry-in
 - b. The Half Adder is faster at calculation
 - c. The Full Adder uses only one input
 - d. The Half Adder only works for logical operations
- 23 In a Full Adder circuit, the number of inputs is:
- a. 2
 - b. 3
 - c. 4
 - d. 1
- 24 In the truth table for an OR gate, when the inputs are (0 and 0), the output is:
- a. 0
 - b. 1
 - c. Depends on the gate
 - d. Undefined

- 25 In a Full Adder circuit, the symbol C refers to:
a. Carry b. Sum c. A third input d. Power line
- 26 The function of a truth table is to:
a. Show all possible input and output combinations
b. Save programming commands
c. Analyze images
d. Display only binary values
- 27 The circuit that outputs the opposite of the input is called:
a. OR b. NOT c. AND d. XOR
- 28 A Full Adder circuit handles:
a. Only one bit b. Two bits and three inputs
c. Two bits and only two inputs d. Four inputs
- 29 When adding 1 and 1 in the binary system, the result is:
a. 0 b. 1 c. 10 d. 11
- 30 The function of a Half Adder circuit is to calculate:
a. The Sum only b. Both the Sum and the Carry
c. Subtraction d. Division
- 31 The logic circuit that outputs 1 only when the inputs are different is called:
a. XOR b. OR c. AND d. NOR
- 32 Which of the following describes a Full Adder?
a. It includes only two inputs
b. It includes 3 inputs and produces two outputs (Sum and Carry)
c. It produces only one output
d. It does not contain an XOR gate
- 33 In logic circuits, the value (1) means:
a. False b. True c. Null d. Off
- 34 Knowledge means:
a. Copying information.
b. Analyzing and organizing information to solve problems.
c. Raw data.
d. Rumors.



- 35 Which of the following malware replicates itself and spreads across the internet?
a. Trojan Horse b. Worm c. Spyware d. Ransomware
- 36 The basic unit of information is:
a. 1 Megabyte b. 1 Kilobyte c. 1 Byte d. 1 Bit
- 37 Which of the following is considered a violation of information ethics?
a. Verifying sources.
b. Publishing copyrighted images without permission.
c. Respecting privacy.
d. Avoiding cyberbullying.
- 38 The duration of protection for patents is:
a. 7 years b. 10 years c. 20 years d. 50 years
- 39 The number of possible combinations to represent 3 bits is:
a. 2 b. 4 c. 8 d. 16
- 40 Which of the following rights protects the economic interests of celebrities?
a. Right to privacy.
b. Image rights.
c. Right of publicity (or Publicity Rights).
d. Copyrights.
- 41 Which of the following cybercrimes relies on using another person's username or password?
a. Network crimes.
b. Violation of the unauthorized access law.
c. Manipulation of stored data.
d. Phone fraud.
- 42 Which of the following is an example of knowledge-based authentication?
a. Fingerprint. b. Smart card.
c. Password and PIN code. d. SMS verification.

- 43 Which of the following is an example of digital character encoding?
- a. ASCII
 - b. Sans-serif
 - c. Semi-cursive
 - d. Font
- 44 The hexadecimal code for the character "H" in the string "Hello" is:
- a. 65
 - b. 48
 - c. 6C
 - d. 6F
- 45 What is the ten's complement of the number 635 in the decimal system?
- a. 365
 - b. 365
 - c. 375
 - d. 395
- 46 Which of the following elements is essential for displaying characters on a computer screen?
- a. Font only.
 - b. Encoding only.
 - c. Encoding + Font.
 - d. Hexadecimal system.
- 47 Which of the following causes character corruption?
- a. Mismatch between encoding and decoding systems.
 - b. Slow computer speed.
 - c. Different font types.
 - d. Low Random Access Memory (RAM).
- 48 In computers, the subtraction operation is performed using:
- a. Addition using complements
 - b. Multiplication by the complement of the number
 - c. Conversion to the decimal system
 - d. Direct subtraction
- 49 The character "H" in the string "Hello" is represented in hexadecimal by the code:
- a. C6
 - b. 65
 - c. 48
 - d. F6
- 50 To display characters on a computer screen, we need:
- a. Font only
 - b. Encoding only
 - c. Encoding and Font together
 - d. Hexadecimal encoding only
- 51 What is the ten's complement of the number 71 in the decimal system?
- a. 18
 - b. 29
 - c. 29
 - d. 31



- 52** Which of the following is considered a primary source of information?
- a. School textbook
 - b. A personal experience report
 - c. Daily newspaper
 - d. Television program
- 53** Communication and transmission media include:
- a. DVD Discs
 - b. Radio and Television
 - c. Pictures and Texts
 - d. Cloud Storage
- 54** Which of the following is considered a violation of information ethics?
- a. Verifying sources
 - b. Publishing copyrighted pictures without permission
 - c. Respecting privacy
 - d. Not using electronic passwords
- 55** Which of the following is considered identity theft?
- a. Sharing a video
 - b. Pretending to be someone else and stealing their account
 - c. Using a phone while walking
 - d. Spreading rumors
- 56** Which of the following is considered basic personal data?
- a. National ID number
 - b. Fingerprint
 - c. Date of birth
 - d. Health condition
- 57** Which of the following rights protects the economic interests of creators?
- a. Privacy rights
 - b. Copyrights
 - c. Advertising rights
 - d. Publishing rights
- 58** The license that organizations obtain to confirm their commitment to data protection is called:
- a. Objection system
 - b. Privacy policy
 - c. Personal Data Protection License
 - d. Prior consent system

59 Which of the following is considered secondary information?

- a. Results of a new survey
- b. Reports of personal experiences
- c. A published scientific book
- d. Field survey

60 Which of the following rights is recognized by law and the judiciary?

- a. Publishing rights
- b. Copyrights
- c. Intellectual property rights
- d. Privacy rights

61 The system that requires explicit consent from the user before providing a service is called:

- a. Objection system
- b. Privacy policy
- c. Prior consent system
- d. License

62 The Patent Rights protection period is:

- a. 7 years
- b. 10 years
- c. 20 years
- d. 50 years

63 Which of the following is considered a neighboring right to copyright?

- a. Design rights
- b. Performers' rights such as singers and actors
- c. Trademark rights
- d. Utility model rights

64 Which of the Creative Commons licenses allows the use of a work provided the author's name is mentioned?

- a. Non-commercial (NC)
- b. No derivatives (ND)
- c. Credit to creator (BY)
- d. Same terms for adaptations (SA)

65 Which of the following malware replicates itself and spreads over the internet?

- a. Trojan horse
- b. Worm
- c. Spyware
- d. Ransomware



- 66 Which of the following cybercrimes depends on using another person's username or password?
- a. Cybercrimes
 - b. Violation of unauthorized access law
 - c. Manipulation of stored data
 - d. Phone fraud
- 67 The purpose of copyright is:
- a. Ensuring fair use and protecting rights
 - b. Preventing all forms of quotation
 - c. Allowing infringement of intellectual property rights
 - d. Using works for commercial purposes only
- 68 Which of the industrial property rights protects the shape or structure of a product?
- a. Trademark rights
 - b. Design rights
 - c. Utility model rights
 - d. Patent
- 69 The protection period of copyright lasts:
- a. The lifetime of the creator only
 - b. 20 years from the date of publication
 - c. The creator's lifetime + 50 years after death
 - d. A fixed 100 years
- 70 Which of the following threats collects personal information without the user's knowledge?
- a. Ransomware
 - b. Spyware
 - c. Viruses
 - d. Trojan horse
- 71 One-Time Password (OTP) means:
- a. A password that never changes.
 - b. A password that can be used multiple times.
 - c. A password that changes periodically and is used only once.
 - d. A password based on the date of birth.

- 72 Which of the following is an example of knowledge-based authentication?
- a. Fingerprint.
 - b. Smart card.
 - c. Password and PIN.
 - d. SMS verification.
- 73 Two-step authentication relies on:
- a. Two different types of factors.
 - b. Two pieces of information of the same type of factor.
 - c. Fingerprint + password.
 - d. SMS code + smart card.
- 74 The number of possible probabilities to represent 3 bits is:
- a. 2
 - b. 4
 - c. 8
 - d. 16
- 75 The basic unit of information is:
- a. 1 megabyte
 - b. 1 kilobyte
 - c. 1 byte
 - d. 1 bit
- 76 Which of the following is an example of digital character encoding?
- a. ASCII
 - b. Sans-serif
 - c. Semi-cursive
 - d. Font
- 77 One of the causes of character corruption is:
- a. Weak processor speed.
 - b. Mismatch between encoding and decoding methods.
 - c. Low storage capacity.
 - d. Different font types.
- 78 Which of the following elements are necessary to display characters on a computer screen?
- a. Font only.
 - b. Encoding only.
 - c. Encoding + Font.
 - d. Hexadecimal system.
- 79 The letter "H" in the string "Hello" is represented in the hexadecimal system by the symbol:
- a. 6C
 - b. 65
 - c. 48
 - d. 6F

- 80 Complements are used to represent in computers.
a. positive numbers
b. negative numbers
c. decimal numbers
d. all of them
- 81 The connection standard that transmits audio and video over a single cable is:
a. USB
b. HDMI
c. Ethernet
d. VGA
- 82 To calculate the 9's Complement of a decimal number, you subtract each digit from:
a. 10
b. 9
c. 5
d. 1
- 83 What is the 9's Complement of the number 635?
a. 635
b. 365
c. 463
d. 364
- 84 is the term that refers to visually representing data to make it more understandable.
a. Abstraction
b. Pictogram
c. Structuring
d. Visualization
- 85 The smallest unit that defines the shape of a digital image is
a. Resolution unit (dpi)
b. The Pixel
c. Sampling
d. Encoding
- 86 What is the function of the operating system?
a. Increase internet speed
b. Control hardware functions and run programs
c. Only save files
d. Temporarily shut down the computer
- 87 what is the Two's Complement of the binary number 0101 (2) ?
a. 1010 (2)
b. 1011 (2)
c. 0101 (2)
d. 0001 (2)
- 88 Programs and data are stored temporarily in
a. Main memory.
b. Secondary memory.
c. Arithmetic Unit.
d. Input Unit.

- 89 What is the relationship between the 9's Complement and the 10's Complement?
- The 10's Complement is the 9's Complement minus 1.
 - The 10's Complement is the 9's Complement plus 1.
 - The 10's Complement is the 9's Complement multiplied by 10.
 - The 10's Complement is the 9's Complement divided by 10.
- 90 What is the One's Complement of the binary number 0101?
- 0101 (2)
 - 1011 (2)
 - 1010 (2)
 - 0110 (2)
- 91 If an image has a resolution of X pixels (vertical) $\times$ Y pixels (horizontal), and each pixel is represented by Z bits, the correct equation for calculating the data size (in bits) is
- $X \times Y$
 - $X \times Y \times Z$
 - $Z + (X \times Y)$
 - $X \times Y \times \{\text{Number of primary colors}\}$
- 92 In the method of subtraction using complements, which operation does a computer use instead of subtraction?
- Multiplication
 - Division
 - Addition
 - Subtraction itself
- 93 To calculate the 10's complement of the number 29, you first find its 9's complement, which is 70, What is the 10's Complement?
- 70
 - 71
 - 69
 - 80
- 94 Which of the following is considered system software?
- Operating System
 - Excel program
 - PowerPoint program
 - Browser application
- 95 How do you get the Two's Complement from the One's Complement?
- By flipping the bits again.
 - By subtracting (2) 1 from the One's Complement.
 - By adding (2) 1 to the One's Complement.
 - By ignoring the leading digit.



- 96 When subtracting using complements, what should you do with the final carry digit?
- a. Add it to the next digit.
 - b. Multiply it by two.
 - c. Leave it as it is.
 - d. Ignore it.
- 97 In the binary system, what do you do to each bit to find the One's Complement?
- a. Multiply it by 2.
 - b. Subtract it from 10.
 - c. Invert it (flip it) from 0 to 1 and 1 to 0.
 - d. Add 1 to it.
- 98 In subtraction using complements, you must first find the complement of the
- a. Subtracted from.
 - b. Subtrahend
 - c. Final result.
 - d. Leading digit.
- 99 Which of the following is considered a hardware component?
- a. Operating System
 - b. Internet Browser
 - c. Excel Application
 - d. Central Processing Unit (CPU)
- 100 In the decimal subtraction $8 - 6$ using complements, you add 8 to the 10's complement of 6 (which is 4). What is the result of this addition before you ignore the carry digit?
- a. 2
 - b. 4
 - c. 12
 - d. 8
- 101 Secondary memory is used for.....
- a. Storing data temporarily.
 - b. Executing instructions quickly.
 - c. Long-term storage of data and programs.
 - d. Controlling data flow.
- 102 what is the experience or emotional effect users get from interacting with a product or service?
- a. User Interface (UI)
 - b. Graphical User Interface (GUI)
 - c. User Experience (UX)
 - d. Affordance

- 103 What is the main disadvantage of the Bitmap format compared to the Vector format?
- a. It reduces the number of pixels in the image.
 - b. It only allows for representing text and shapes.
 - c. It causes symbols to appear unreadable when printed.
 - d. Jaggies appear when the image is enlarged.
- 104 According to the LATCH principle, which type of classification is based on the sequence of events over time?
- a. Location
 - b. Alphabet
 - c. Time
 - d. Category
- 105 In the 24-bit full color system, what is the number of color levels that can be represented for a single primary color (like Red)?
- a. 8 levels
 - b. 24 levels
 - c. 256 levels
 - d. 224 levels
- 106 What is meant by Software?
- a. The hardware devices of the computer
 - b. The programs and data that run on the hardware
 - c. Only the computer's memory
 - d. The network components
- 107 What is the concept that refers to how easily data and services can be accessed by a wide range of people, including those with special needs?
- a. Affordance
 - b. Usability
 - c. Accessibility
 - d. Universal design
- 108 What are the three primary colors of light which, when mixed, increase in brightness and approach white?
- a. Cyan, Magenta, and Yellow
 - b. Red, Green, and Blue
 - c. Violet, Yellow, and Black
 - d. White, Gray, and Black
- 109 What is the interface where icons and buttons are used in an easy-to-understand way to exchange information between humans and devices?
- a. Command Line Interface (CUI)
 - b. User Interface (UI)
 - c. Graphical User Interface (GUI)
 - d. User Experience (UX)



- 110 According to the LATCH principle, which type of classification is based on the differences between things and is used as an axis to distinguish domains?
- a. Location b. Alphabet c. Time d. Category
- 111 A computer consists of five main components, which are:
- a. Control Unit, Arithmetic Unit, Memory Unit, Input Unit, Output Unit.
- b. Screen, Mouse, Printer, Keyboard, Storage Unit.
- c. Processor, Motherboard, Battery, Hard Drive, Screen.
- d. Input Unit, Output Unit, Network Unit, Cooling Unit, Arithmetic Unit.
- 112 Examples of input units
- a. Screen and Printer. b. Keyboard and Scanner.
- c. Hard Drive and SSD. d. Speakers and Wireless Mouse.
- 113 The relationship between the five computer components depends on:
- a. Data flow and control flow between the units.
- b. Only the speed of the hard drive.
- c. Screen size and display resolution.
- d. The type of operating system used.
- 114 The Control Unit and the Arithmetic Unit are known together as
- a. Input Unit. b. Memory Unit.
- c. Central Processing Unit (CPU). d. Storage Unit.
- 115 The standard used to connect computers within Local Area Networks (LAN) is
- a. HDMI. b. Bluetooth. c. Ethernet. d. USB.
- 116 USB is typically used to connect
- a. Network devices only.
- b. Peripheral devices such as printers.
- c. Internal storage units.
- d. Audio systems only.

- 117 The function of the Control Unit is.....
- a. Executing instructions and issuing commands to the other units.
 - b. Storing data temporarily.
 - c. Processing data only.
 - d. Outputting the final information.
- 118 What is meant by an "Interface"?
- a. A program that manages hardware.
 - b. A component that mediates information exchange between the computer and peripheral devices.
 - c. An internal storage unit.
 - d. The operating system for peripheral devices.
- 119 is the most widely used interface for peripheral.
- a. HDMI
 - b. Ethernet
 - c. USB
 - d. CPU

**2 Put (✓) or (X) in Front of the following sentences:**

- 1 Data are raw facts represented in the form of numbers, letters, or symbols. (....)
- 2 One of the characteristics of information is that it completely disappears after being published on the Internet. (....)
- 3 Secondary information is obtained from three parties such as books and research. (....)
- 4 Videos, pictures, and texts are examples of communication media. (....)
- 5 Information literacy means the ability to interpret information accurately. (....)
- 6 Respecting copyright and privacy is part of information ethics. (....)
- 7 Internet addiction and using a phone while walking are among the problems related to smartphones. (....)
- 8 Religion, health condition, and race are considered sensitive personal data. (....)
- 9 Privacy policies in companies aim to explain how customer data is collected and protected. (....)
- 10 Intellectual property rights are divided into industrial property rights and copyright. (....)
- 11 The Formality principle means that copyright is established only after officially registering the work. (....)
- 12 Industrial property rights include patent Right and trademarks. (....)
- 13 Copyright is established at the moment of creation and does not require registration. (....)
- 14 Industrial property rights include patent Right and trademarks. (....)
- 15 Copyright is established at the moment of creation and does not require registration. (....)
- 16 Confidentiality, integrity, and availability are essential elements of information security. (....)
- 17 Ransomware is used to protect data and prevent loss. (....)
- 18 A password is a string of characters used to verify that a user is legitimate. (....)

- 19 It is preferable for the password to be short so that it is easy to remember. (....)
- 20 Biometric authentication relies on characteristics such as fingerprints and irises. (....)
- 21 In two-factor authentication, two different types of factors are used for verification. (....)
- 22 A bit can represent more than two states at the same time. (....)
- 23 1 byte equals 8 bits and can represent 256 different probabilities. (....)
- 24 The hexadecimal system uses numbers from 0 to 9 and letters from A to F. (....)
- 25 When converting from binary to hexadecimal, the binary number is divided into groups of 8 bits. (....)
- 26 ASCII code supports all languages, including Arabic. (....)
- 27 Unicode standard was designed to collect character symbols from different world languages into one system. (....)
- 28 Encoding is the process of converting digital data into readable characters. (....)
- 29 Font is the shape data of characters corresponding to character symbols. (....)
- 30 The final step in subtraction is to ignore the leading digit. (....)
- 31 Pictograms use words to express information (....)
- 32 A digital image is made up of small units called pixels. (....)
- 33 Word processing software is a type of system software. (....)
- 34 Secondary memory is used for temporary storage. (....)
- 35 Complements are used to represent positive numbers. (....)
- 36 Quantization of an image assigns numbers to brightness. (....)
- 37 GUI uses icons and buttons for easy interaction. (....)
- 38 The control unit and arithmetic unit together form the CPU. (....)
- 39 Subtraction in computers is done using addition with complements. (....)
- 40 In sampling, The image is divided into pixels. (....)



- 41 Input devices like keyboard and mouse output information. (....)
- 42 A driver is a type of hardware. (....)
- 43 The unit of resolution is dpi (....)
- 44 LATCH method makes information harder to understand. (....)
- 45 The Main memory manages the flow of control. (....)
- 46 24-bit full color uses 8 bits for each primary color. (....)
- 47 Icons represent a program's content visually. (....)
- 48 An interface mediates data exchange between the computer and peripherals. (....)
- 49 Subtractive color mixing is used to represent colors in computer screens. (....)
- 50 Android OS is an example of application software. (....)
- 51 The control unit performs calculations in the computer. (....)
- 52 Higher resolution images have fewer pixels than lower resolution images. (....)

Answers

Final Revision

1

- 1 b 2 b 3 a 4 c 5 d 6 a 7 a 8 c 9 b 10 a 11 a 12 b
 13 b 14 b 15 b 16 b 17 b 18 b 19 a 20 b 21 c 22 a 23 b 24 a
 25 a 26 a 27 b 28 b 29 c 30 b 31 a 32 b 33 b 34 b 35 b 36 c
 37 b 38 c 39 c 40 c 41 b 42 c 43 a 44 b 45 a 46 c 47 a 48 a
 49 c 50 c 51 b 52 b 53 b 54 b 55 b 56 c 57 b 58 c 59 c 60 d
 61 c 62 c 63 b 64 c 65 b 66 b 67 a 68 c 69 c 70 b 71 c 72 c
 73 b 74 c 75 c 76 a 77 b 78 c 79 c 80 b 81 b 82 b 83 d 84 d
 85 b 86 b 87 b 88 a 89 b 90 c 91 b 92 c 93 b 94 a 95 c 96 d
 97 c 98 b 99 d 100 c 101 c 102 c 103 d 104 c 105 c 106 b 107 c 108 b
 109 c 110 d 111 a 112 b 113 a 114 c 115 c 116 b 117 a 118 b 119 c

2

- 1 T 2 F 3 T 4 F 5 T 6 T 7 T 8 T 9 T 10 T 11 F 12 T
 13 T 14 T 15 T 16 T 17 F 18 T 19 F 20 T 21 T 22 F 23 T 24 T
 25 F 26 F 27 T 28 F 29 T 30 T 31 F 32 T 33 F 34 F 35 F 36 T
 37 T 38 T 39 T 40 T 41 F 42 F 43 T 44 F 45 F 46 T 47 T 48 T
 49 F 50 F 51 F 52 F

كيفية طباعة صفحات معينة من ملف معين مثلا ازاي نطبع الصفحات من صفحة 4 الى صفحة 9



حمل الآن

مجاناً وحصرياً

المراجعة رقم (2)

الترم الاول



unit one lesson 1 : Information and Media

Data) : Facts or matters represented using numbers, characters, or symbols.

Information : Something that holds meaning or value for the recipient and serves as a basis for decision-making. Unlike objects, information has no form.

Information has the following characteristics.

Persistence) : Information, once created, cannot be completely erased.

Reproducibility : Information can be easily copied in large quantities.

Persistence) : Information, once created, cannot be completely erased.

Information is easy to convey and spread

Primary information Information obtained through direct personal experience or acquired through research and experiments.

Example : Experimental reports, survey results, tabulations of questionnaire results, etc.

Secondary information: Information not obtained directly by oneself, but acquired through a third party.

Example: Books, newspapers, television, etc

Knowledge) : Information that has been analyzed and systematized to aid in problem-solving.

Cross-verification: Determining the accuracy and reliability of information and ensuring its correct interpretation.

Media: for conveying information to people.

Types of media

Expression media
Media used as a means of expressing information. As :Text, images, audio, video

Propagation/ Transmission media) Media used as an intermediary for the transmission and communication of information. Television, radio, newspapers, books, telephone, internet

recording media
used for recording and storing information. Paper, USB drives, DVDs, cloud storage



Media literacy : The ability to accurately interpret information obtained from media



unit one lesson 2 : Information Ethics

Information ethics : The foundational concepts and attitudes necessary for conducting appropriate activities in the information society. This is regardless of the presence or absence of law.

Characteristics of Information on the internet

infringement of Others' Rights • You must not publicly share images or videos for which others hold the copyright) without permission. • You must not leak the (6 personal information) of another person on the internet. • You must not infringe upon others' (privacy). • You must not post comments that slander or defame others or engage in (online bullying).

Geotag (Geotagging) : Information that includes latitude and longitude embedded in photos and videos taken with smartphones and mobile phones.

There is a risk of being identified, such as having your home in pointed based on the location where the photo was taken.

Disinformation and rumors) : False information that is deliberately spread or baseless rumors

Social media) : Services that provide platforms where individuals can connect with each other on the internet. As :Text, images, audio, video

Problems that occur with smartphones and social media Leakage of

Internet addiction
state where one becomes excessively immersed in the internet to the extent of interfering

Using smartphone while walking) : The act of using a smartphone while walking

Cybercrime)
The misuse of computers and networks for criminal activities.

identity theft) : The act of a third party pretending to be a certain individual or organization to steal IDs or password

unit 2 lesson 1 : Personal Information

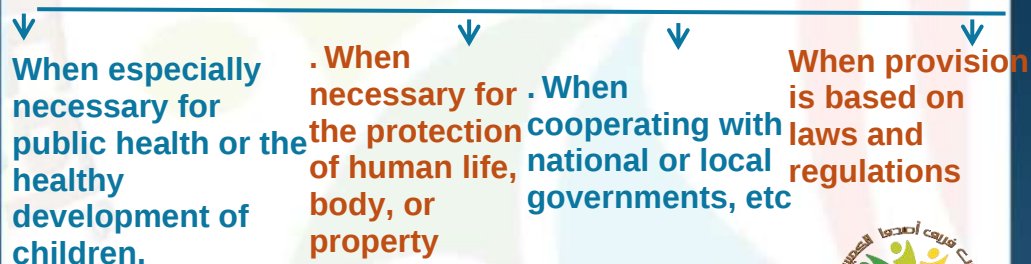
personal information) : When personal information that should remain confidential is disclosed to a third party

Personal Information It is any statement or information relating to a specific natural person, or one who can be identified directly or indirectly, through linking with other data.

types of personal information,



A law that stipulates the proper handling of personal information.: Act on the Protection of Personal Information ,provision of Personal Information to Third Parties • The Act on the Protection of Personal Information states that one cannot provide the personal information of an individual to a third party without the individual's consent. In these cases, it is permissible to provide personal information without obtaining the individual's consent.



Protection of Privacy and Image Rights



Right to Privacy: The right of an individual to protect personal information that the individual does not want others to know

Image Rights) : The right of an individual to prevent others from photographing or using their face or appearance without permission

publicity Rights : A right that protects the economic interests of celebrities in their likeness ,among other things.

*These rights are recognized not by law but through court (precedents

***protection of Personal Information in Corporations and Organizations**

11-Privacy policy : A policy that stipulates how companies and organizations manage personal information.

2-Privacy Mark : A mark (shown on the right) awarded to companies or organizations that implement appropriate protective measures for personal information.

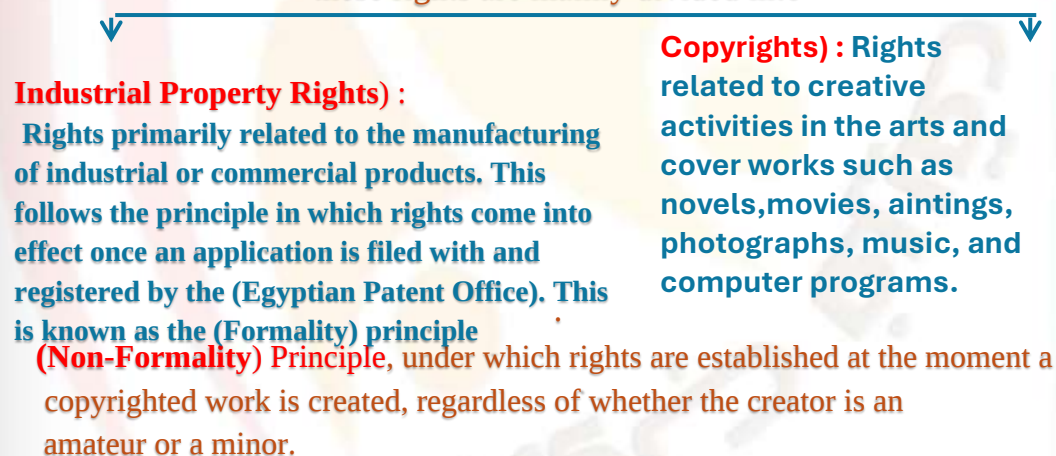
3-Opt-in system : A method in which a provider does not offer a service to a user unless prior consent is given.

4-Opt-out system: A method in which a service provider continues to offer a service to the user until the user requests the provider to discontinue the service.

unit 2 lesson 2: Intellectual Property Rights

Are Rights that protect creations and ideas generated by human intellectual activities.

these rights are mainly divided into



Types of industrial property rights

Name	Subject of Rights	Protection Period
patent Rights	Rights to advanced technological ideas and inventions	20 years from the application
Utility Model Rights	Rights to the shape or structure of a product.	7 years from the application
Design Rights	Rights to a design, such as the shape and patterns of a product	10 years from the application
Trademark Rights)	Rights related to items such as product names, logos, text, and sound	10 years from the Registration Updated

Copyright: Rights relating to creative activities in the arts, including works such as novels, films, paintings, photographs, music, computer programs, and audiovisual works.

Rights of Creators

Moral rights of creator : Rights that protect the personal interests of the creator

Copyrights (property rights) : Rights that protect the economic interests of the creator.



Neighboring Rights) : Rights that arise for individuals or entities who communicate or transmit copyrighted works. Granted to performers such as singers, directors,

Copyright protection period : The lifetime of the creator plus (50) years after their death.

Copyright infringement : As a general rule, when reproducing someone else's copyrighted work or using it on a website, it is necessary to obtain (permission) from the creator.

Copyright infringement:. Using others work without permission

unit 2 lesson 3: Utilization and Disclosure of Information

The purpose of copyright is to contribute to cultural development by ensuring fair use of copyrighted works and protecting the rights of the copyright holder.

Exceptions: Copyright can be limited to allow use without the copyright holder's permission.

Quoting: This is the process of using part of another person's copyrighted work in your own copyrighted work. Parts of a copyrighted work can be quoted without the author's permission. **Quotation Methods and Rules**

our own copyrighted work takes precedence, while the quoted work is subordinate.

There must be a necessity to engage in quotation.

Ensure that the quoted material is clearly identifiable by enclosing it in quotation marks.

Ensure that the quoted material is clearly identifiable by enclosing it in quotation marks.

Do not alter the quoted material.

setting the duration of protection : The economic rights of the author expire (50) years after the death of the creator.

Creative Commons License) (CC License) : A mark indicating the conditions for using copyrighted works.

Types of Creative Commons License

Mark	Condition	Content
	Credit to creator) (BY)	Display the title of the work and name of the creator.
	Non-commercial) (NC)	Do not use for (8commercial) purposes Do not alter the original copyrighted work.
	9No derivatives) (ND)	Do not alter the original copyrighted work.
	Same terms for adaptations) (SA)	Publish under the same combination of licenses as the original work



unit 3 lesson 1: Threats and Countermeasures in Information Security [1]

Information security: It is the process of managing information correctly and keeping it safe.

The three essential elements of information security:

Confidentiality: A state in which only authorized individuals can access the information.

Integrity: A state in which the information is not destroyed, tampered with, or erased

Availability: A state in which information can be accessed at any time when needed

Various threats to information security

Unauthorized access: When someone without permission gains access to a computer system

Cracking: The act of unlawfully accessing a system to tamper with, erase, or steal data

Malware: A general term for malicious programs designed to harm computers, , email attachments, or

Infection can occur through

network

USB drives,

websites

Maleware

Computer virus: A program designed to intentionally cause harm, such as destroying data or programs.

Trojan horse: A program disguised as a legitimate one that infiltrates a system and quietly initiates

Worm: A program that replicates itself and spreads across the internet like a worm, expanding the

Ransomware: a program that renders data inaccessible and demands a ransom to restore access

spyware: A program that collects personal information without the user's knowledge and sends it to third parties.

Adware: A program that displays unwanted advertisements without

Spyware

Keylogger Software that monitors and records keystrokes

Cybercrime : Criminal acts committed over computer networks..

Crimes involving computers or electronic records: Crimes involving tampering with stored data or unauthorized manipulation of devices.

Crimes involving computer or electronic records : Crimes involving tampering with stored data or unauthorized manipulation of devices

Violation of the Unauthorized Computer Access Law) : Illegally accessing a computer using someone else's user ID or password.



unit 3 lesson 2: Threats and Countermeasures in Information Security [2]

Passwords and Authentication

1- Password: A string of characters used to verify that the user of a given user ID is the legitimate account holder.

2-Guidelines for creating passwords:

- Use a string that is as (long) as possible.
- (Combine) uppercase letters, lowercase letters, numbers, and symbols.
- Do not use personal information such as your birthday, email address, or user ID.
- Do not reuse passwords used for other services.

3- (One-time-password) : A password that changes at regular intervals and can only be used once.

4- (Authentication) : The process of verifying the identity of a user on a computer or network

Types of authentication:

Name	method	Example
Knowledge-based authentication	Authentication using information known only to the individual	User ID and password, PIN code
Biometric authentication (Biometrics)	Authentication using physical or behavioral characteristics of the individual	Fingerprint, Iris, Vein pattern, Handwriting
Possession-based authentication	Authentication using an item that the individual possesses	C card, One-time password, SMS-based verification
Two-factor authentication	A method that combines two different types of factors from "knowledge," "biometrics," and "possession" to perform authentication.	PIN or a code SMS
Two-step authentication	A method that performs authentication in two steps using two pieces of information from the same type of factor	Password + Security Question

Information Security Measures:

Access control: A method of limiting access to computer systems or data so that only specific users, verified through authentication, are allowed to use them.

Firewall : A system installed at network entry points to prevent (unauthorized access) from outside and to stop (data leaks) from within.

Computer virus prevention measures:
Install antivirus software
Keep virus definitions up to date Always maintain your operating system (OS)

unit 3 lesson 3: Threats and Countermeasures in Information Security (3)

Fraudulent Billing

Fraudulent billing: A scam in which a person is billed for a fictitious service they have never used, with the intent to fraudulently extract money.

one-click fraud): A scam where clicking a URL in a website or email automatically triggers a message pretending a contract has been concluded, followed by an exorbitant payment demand

Unauthorized Acquisition of Information

Skimming :The act of pretending to be someone else—such as making a phone call in their name—to obtain information.

Social engineering:
A method of fraudulently obtaining information by exploiting human psychology, carelessness, or lack of awareness
(Impersonation- Shoulder surfing- Dumpster diving)

Phishing : A scam that uses fake websites disguised as financial institutions or public agencies to steal personal information such as PINs or account details.

Information security policy: A set of rules established by a company or organization to maintain and protect information security.

Information Security Policy

Implementation Procedures and Operational Rules

Security Standards

Policy

Unit 6 lesson 2 Binary and Amount of Information

Bit is The smallest unit of information, it has only two states: "0" and "1".
The key is either open or closed.

1 bit: Two possibilities: 0 or 1.



2 Bits : Four possibilities: 00, 01, 10, 11.

Byte: A unit consisting of 8 bits, symbolized by (B).

8 bits = (1B) 1 Byte, which can represent (256) possibilities.

Data Unit: The basic unit is 1B.

The unit changes every 1,024 times.

1024 B = 1 KB - 1024 KB = 1 MB - 1024 MB = 1 GB - 1024 GB = 1 TB

Decimal System: A method of representing numbers using ten digits from "0" to "9".
(Decimal system) The number expressed in the decimal system.

Binary System: A number system that uses only two digits. (0 and 1) to represent numbers and is sometimes written with a small (2) at the bottom right of the number to show that it is binary.

Converting from binary to decimal: Multiply each binary digit by 2 raised to the power of its position (starting from 0 on the right, then 2 to the power of 1, then 2 to the power of 2, then 2 to the power of 3, and so on), then add the results. **Converting from**

decimal to binary: Divide the decimal number by 2 repeatedly, taking the remainder each time, then write the remainders from last to first.

Unit 6 lesson 3: Hexadecimal system

Hexadecimal: A method of representing numbers using the digits 0 to 9 and the alphabet letters A to F. A number represented in hexadecimal is sometimes written with a subscript (16) placed at the bottom right of the number. This is known as a hexadecimal number.

Correspondence Between Decimal, Binary, and Hexadecimal

Hexadecimal	Binary	Decimal	Hexadecimal	Binary	Decimal
9	1001	9	0	0000	0
(A)	1010	10	1	0001	1
(B)	1011	11	2	0010	2
(C)	1100	12	3	0011	3
(D)	1101	13	4	0100	4
(E)	1110	14	5	0101	5
(F)	1111	15	6	0110	6
(10)	10000	16	7	0111	7
			8	1000	8

Convert from binary to hexadecimal: Separate the binary number into groups of 4 digits, starting with the smallest digit.

Convert from hexadecimal to binary: Convert each digit of the hexadecimal number to a 4-bit binary number.

Convert from hexadecimal to decimal: Convert the hexadecimal number to a binary number, then convert that binary number to a decimal number.

Unit 6 lesson 4: Digital Representation of Characters Information

Character code: A unique numerical value assigned to each letter, symbol, etc.

Character code system: Summarizes the conversions between letters and their corresponding character codes.

ASCII (ASCII code) (only for the English alphanumeric language) (a-z) (0-9) symbols, and control characters (characters used for computer control and not supporting other languages).

Unicode: A character encoding standard that combines characters from around the world into a single character code. Due to differences in code assignments, there are variations such as UTF-8 and UTF-16.

Encoding: Representing a string with character codes; the reverse is known as decoding.

Character corruption: A phenomenon that occurs due to mismatched encoding and decoding methods.

Font: The format data of characters corresponding to their character codes. To display characters on a computer screen or printer output, there are two essential elements: the character code and the font.

Unit 6 lesson 5: Numerical Calculations [1]

Binary Addition and Subtraction: Addition and subtraction in binary numbers are performed digit by digit, just as in decimal numbers.

Binary Addition: In binary addition, the value is carried over by one place value when the sum reaches 2. When 1 and 1 are added together, a carry of 1 is generated to the next higher digit.

Binary Subtraction: In binary subtraction, when the subtrahend is insufficient, a value of 2 is borrowed from the next higher digit. When a 1 is borrowed from the higher digit, there are two 1s in the lower digit.

Unit 6 lesson 6 : Numerical Calculations [2]

Complement: This is the smallest number that, when added to a given natural number, carries over to the next higher digit. Complements are used to represent negative numbers in computers.

Decimal Complement: In the decimal system, it is the smallest number that, when added, carries over to the next higher digit.

Binary Complement: In the binary system, it is the smallest number that, when added, carries over to the next higher digit.

How to Calculate a Binary Complement: For each digit of the original binary number, invert 0 to 1 and 1 to 0, then add 1 at the end to automatically obtain the result.

Subtraction Using Complements: The computer uses subtraction by performing an addition operation with complements.

Subtraction Operation:

1. Find the complement of the subtrahend.
2. Use the complement to perform the addition.
3. Ignore the main digits of the result and present the answer.



Unit 6 lesson 8: Digitization of Images

Pixel: The smallest unit that makes up an image. A digital image is represented by an arrangement of pixels.

Image digitization process: Images are captured by digital cameras or scanners and imported into a computer.

Through the following process:

Sampling: The image is divided into pixels, and the brightness level representative of each pixel is extracted.

Quantization) : Converts the brightness of each pixel into numerical values divided into several levels..

Gradation) : The level value that represents the intensity of color per pixel. The gradation is determined by the number of bits allocated

Resolution: This refers to the degree of sharpness and clarity of pixels during the sampling process.

Unit of resolution: Dots per inch (dpi)

Sometimes expressed as vertical pixels × horizontal pixels

Gradation: The level value representing the color intensity of each pixel. The gradient is determined by the number of bits allocated to each pixel.

Image data size: bits = (number of vertical pixels × horizontal pixels) × number of bits for color information

Note: Higher resolution and gradient values result in a smoother and better-quality image, but the data size increases.

Raster Format and Vector Format

Raster format) : An arrangement of pixels used to represent text or shapes. It appears jagged when enlarged (this appearance is called (13jaggies)). Images are drawn using (14painting software).

Vector format) : A representation that includes information about coordinates of points composing the image, as well as the angles and thickness of the lines connecting them. Images are drawn using (drawing software).

The three primary colors of light: red, green, and blue. Mixing these colors increase brightness and approaches white.

The three primary colors of pigment: cyan, magenta, and yellow. Mixing these colors darkens them and approaches black.

Additional color mixing: A method of representing colors by combining the primary colors of light. Used in televisions and computer monitors.

Subtractive color mixing: A method of representing colors by Combining the primary colors of pigment. Used in color printers.

A full color: A color of red, green, and blue represented by 256 levels.
24 bits = 3 x 8 bits = 24



Unit 6 lesson 10: Information Design



Data design: The process of organizing and creatively expressing data according to its purpose, ensuring that the intended message is correctly conveyed to the target audience.

Information Design Methods

Icon:

A representation of the program's content on a computer or smartphone, depicted through images or illustrations.

Pictographic symbol:

A pictorial symbol designed to convey data without using words. It is used for informational signs in stations and airports.

Abstraction: Simply transferring the intended data from within a large amount of data.

Visualization: Representing data visually to make it more understandable.

Examples: tables, graphs, etc.

• **Structuring:** Organizing and expressing data clearly and sequentially according to relationships, levels, stages, order, etc.

Examples: hierarchical lists on web pages, large store maps, etc.

Design Techniques for Ease of Understanding

User interface (UI)	A system for transferring information between humans and devices .Examples: Voice input, touch panel, keyboard, etc
CUI	A user interface where a device is operated by entering commands via a keyboard.
GUI	A user interface that allows users to issue commands in an intuitive and easy-to understand way using icons and buttons
User experience (UX)	he experience or emotional impact that users gain from interacting with a product or service
Affordance	Actions or operations that can be performed on an object
Signifier	Cues that prompt users to take action.
Usability	A measure used to indicate how easy and understandable it is for users
Accessibility	The ease of access to information and services for a wide range of people.
Universal design	Design that is thoughtfully created with the intention that all people, regardless of age, language, nationality, or physical ability, can use it without difficulty

LATCH principal for Organizing and Classifying Information

Location	Classification based on physical location.
Alphabet	Classification based on alphabetical or syllabary order.
Time	A classification based on the sequence of events in terms of time.
Category	A classification based on the differences between things, used as a criterion to distinguish realms.
Hierarchy	Classification based on quantitative changes such as size, level, etc

Unit 7 lesson 1: Computer Configuration

- 1. Hardware:** Such as the main computer unit and peripherals.
- 2. Peripherals:** Devices used by connecting them to a computer.
Examples: Keyboard, mouse, monitor, printer, etc.

3. The five main components of a computer

The five main components	Role	Example of major component
Control unit	Executes a computer's (instructions) and issues (commands) to each function.	(CPU)-CU
Arithmetic unit	Performs (calculations).	CPU -(ALU)
Main memory device (Memory)	Temporarily stores programs, data	RAM
Secondary memory (Storage)	For (long-term) storage of programs and data	HARD DISK (SSD) USB
Input device	Inputs) information from external sources	Keyboard,mouse,scanner
Output devices	Outputs) information outside of the computer.	Monitor ,printer



Interface: A component that facilitates information exchange and is used to connect a computer to peripheral devices.

USB: The most commonly used interface for computer peripherals. Compatible with printers, keyboards, and external hard drives.

HDMI: A communication standard that allows the transmission of video, audio, and other data over a single cable. Compatible with digital televisions and audio equipment.

Ethernet: A communication standard used in wired local area networks (LANs) in homes, offices, etc Compatible with devices such as hubs and routers.

Unit 7 lesson 2: Computer Software

Hardware : Devices such as the main computer unit and peripheral devices.

Examples: CPU, memory, storage, etc.

Software : Programs and data that operate on hardware.

Operating system	Operating system (OS) : A type of system software responsible for the basic functions of a computer. An OS has management functions such as task management, memory management, and file management.	Window , macOS , Android OS,
Application software)	Software that operates on top of system software. Also known as application software	Word processing software, spreadsheet software, etc
Device driver	A program that controls communication between a connected device and software on a computer. Also known simply as a "driver.	Driver



Unit 7 lesson 3: Logic Circuits

Logical operations: Operations performed using combinations of the numbers 0 and 1. In computers, "1" is treated as true and "0" as false.

Logic circuit: A circuit designed to perform logical operations.

Truth table: A table that shows all possible combinations of inputs and outputs for a logic circuit.

AND gate (Logic coupling circuit): A circuit that outputs 1 only when all inputs are 1.

OR gate (Logic disengagement circuit): A circuit that outputs 1 if there is at least one input that is 1.

NOT circuit (Inverting circuit): A circuit that outputs the opposite result to the input.

Half adder circuit: A circuit that represents the addition of single-digit numbers, consisting of AND, OR, and NOT gates.

Full adder circuit: A circuit that considers both the lower and higher bits.



*With our best wishes for
success*

Put a checkmark (✓) next to the correct statement and an X (✗) next to the incorrect statement:

1. Data is raw facts represented by numbers, letters, or symbols. ()
2. One characteristic of information is that it disappears completely after being published on the internet. ()
3. Secondary information is obtained from a third party, such as books and newspapers. ()
4. Examples of media of expression include: texts, images, and video. ()
5. Media literacy means the ability to accurately interpret information from media. ()
6. Respecting copyright and privacy is an aspect of information ethics. ()
7. Internet addiction and using a phone while walking are problems associated with smartphones. ()
8. Sensitive personal data includes: race, religion, and health status. ()
- 9 Privacy policies in companies aim to clarify how customer data is collected and protected. ()
10. Intellectual property rights are divided into industrial property rights and copyright rights.
11. The principle of registration means that copyright is only established after the work is officially registered.
12. Industrial property rights include: patents and trademarks. ()
13. Copyright is established at the moment the work is created and does not require registration. ()
14. One of the essential elements of information security is confidentiality, integrity, and availability. ()

15. Ransomware is used to protect data and prevent loss. ()

16. A password is a string of characters used to verify that a user is legitimate. ()

17. It is preferable for the password to be short so that it is easy to remember. ()

18. Biometric authentication relies on characteristics such as fingerprints and irises. ()

19. In two-factor authentication, two different types of factors are used for Verification ()

20. A bit can represent more than two states at the same time. ()

21. 1 byte equals 8 bits and can represent 256 different probabilities. ()

22. The hexadecimal system uses numbers from 0 to 9 and letters from A to F. ()

23. When converting from binary to hexadecimal, the binary number is divided into groups of 8 bits. ()

24. ASCII code supports all languages, including Arabic. ()

25. Unicode standard was designed to collect character symbols from different world languages into one system. ()

26. Encoding is the process of converting digital data into readable characters. ()

27. Font is the shape data of characters corresponding to character symbols. ()

28. A character code is a unique numerical value assigned to each character or symbol. ()

29. The ASCII system supports all the world's languages, including Arabic. ()

30. The Unicode standard aims to unify the representation of all characters in the world's languages ()

31. Encoding is the process of converting numbers into readable characters. ()

32-When adding two binary digits $(1 + 1)_{(2)}$ the result is $(10)_{(2)}$ in the binary system. ()

33. In binary subtraction, borrowing is done from the higher digit when the current value is not sufficient for subtraction. ()

Choose the correct answer:

1. Which of the following represents "information"?

- A) Raw facts. B) Something that has meaning or value for the recipient.
C) Unintelligible symbols. D) Numbers only.

2. Knowledge means:

- A) Copying information.
B) Analyzing and organizing information to solve problems.
C) Raw data. D) Rumors.

3. Which of the following is considered a source of primary information?

- A) A textbook. B) A personal experience report.
C) A daily newspaper

4. Media of transmission or broadcasting include:

- A) DVDs. B) Television. And radio.
C) Texts and images. D) Cloud storage.

5. Which of the following is a violation of information ethics?

- A) Verifying sources.

B) Publishing copyrighted images without permission.

C) Respecting privacy.

D) Not cyberbullying.

6. Which of the following is considered identity theft?

A) Sharing a video.

B) Impersonating someone else to steal accounts.

C) Using a phone while walking.

D) Spreading rumors.

7. Which of the data Which of the following is considered basic data?

A) National ID number.

B) Iris scan.

C) Date of birth.

D) Health status.

8. Which of the following rights protects the economic interests of celebrities?

A) Right to privacy.

B) Image rights.

C) Publicity rights.

D) Copyright.

9. The license that companies obtain from the regulatory body to ensure their compliance with data protection is called:

A) Objection system.

B) Privacy policy.

C) Personal data protection center license.

D) Prior consent system.

10. The patent protection period is:

A) 7 years

B) 10 years

C) 20 years

D) 50 years

11. Which of the following is considered a neighboring right to copyright?

A) Design rights

B) Performers' rights, such as singers and actors

C) Trademark rights

D) Utility model rights

12. Which Creative Commons license allows the use of the work provided the author's name is mentioned?

A) (NC) (Non-commercial) D) (No derivatives)

C) (BY) (Attribution to the creator)

D) (SA) (Same conditions) For modifications

13. Which type of malware replicates itself and spreads across the internet?

A) Trojan horse B) Worm C) Spyware D) Ransomware

14. Which cybercrime relies on using someone else's username or password?

A) Network crimes B) Violation of unauthorized access laws

C) Manipulation of stored data D) Telephone fraud

15 The purpose of copyright is to:

A) Ensure fair use and protect rights. B) Prevent all forms of quotation.

C) Allow infringement of intellectual property rights. Intellectual property.

d) Use of the works for commercial purposes only.

16. One-Time Password (OTP) means:

a) A password that never changes.

b) A password that can be used multiple times.

c) A password that changes periodically and is used only once.

d) A password based on the date of birth.

17. Which of the following is an example of knowledge-based authentication?

a) Fingerprint. b) Smart card. c) Password and PIN. d) SMS verification.

18. Two-step authentication relies on:

a) Two different types of factors.

b) Two pieces of information of the same type of factor.

c) Fingerprint + password.

d) SMS code + smart card.

19. The number of possible probabilities to represent 3 bits is:

- a) 2 b) 4 c) 8 d) 16

20. The basic unit of information is:

- a) 1 megabyte b) 1 kilobyte c) 1 byte d) 1 bit

21. When converting the binary number 1011(2) to decimal, the result is:

- a) 10 b) 11 c) 12 d) 13

22. The binary number 10011010(2) is equivalent to which in the hexadecimal system:

- a) 9A(16) b) A9(16) c) 19(16) d) 91(16)

23. When converting the hexadecimal number A4(16) to binary, the result is:

- a) 10011010(2) b) 10100100(2) c) 11001001(2) d) 11100011(2)

24. Which of the following is an example of digital character encoding?

- a) ASCII b) Sans-serif c) Semi-cursive d) Font

25. One of the causes of character corruption is:

- a) Weak processor speed.
decoding methods. b) Mismatch between encoding and
decoding methods.
c) Low storage capacity. d) Different font types.

26. Which of the following elements are necessary to display characters on a computer screen?

- a) Font only. b) Encoding only.
c) Encoding + Font. d) Hexadecimal system.

27. The letter "H" in the string "Hello" is represented in the hexadecimal system by the symbol:

- a) 6C b) 65 c) 48 d) 6F

28. The letter "H" in the string "Hello" is represented in the hexadecimal system by the symbol:

- a) 65 b) 48 c) 6C d) 6F 4)

29. Which of the following is not a character encoding system?

- a) ASCII b) Unicode c) UTF-8 d) BIOS

30. Which of the following causes character corruption?

- a) A mismatch between the encoding and decoding systems.
b) Weak processor speed.
c) Different font types. d) Lack of random access memory (RAM).

31. In binary addition, the result of $1(2) + 1(2)$ is:

- a) 0 with a carry of 1 b) 10 (2) c) 2 (2) d) 11 (2)

32. The result of the binary subtraction $1010_{(2)} - 0110_{(2)}$ is:

- a) $0010_{(2)}$ b) $0100_{(2)}$ c) $0110_{(2)}$ d) $1000_{(2)}$

33. To display characters on a computer screen, we need:

- a) Font only . b) Encoding only. c) Encoding + Font together.
d) Hexadecimal system only.

34. What is the relationship between the 9's Complement and the 10's Complement?

- a. The 10's Complement is the 9's Complement minus 1.
b. The 10's Complement is the 9's Complement plus 1.
c. The 10's Complement is the 9's Complement multiplied by 10.
d. The 10's Complement is the 9's Complement divided by 10.

35. What is the One's Complement of the binary number 0101?

- a. 0101 (2) b. 1011 (2) c. 1010(2) d. 0110 (2)

36. In the method of subtraction using complements, which operation does a computer use instead of subtraction?

- a. Multiplication b. Division c. Addition d. Subtraction

37. To calculate the 10's complement of the number 29, you first find its 9's complement, which is 70. What is the 10's Complement?

- a. 70 b. 71 c. 69 d. 80

38. To calculate the 9's Complement of a decimal number, you subtract each digit from:

- a. 10 b. 9 c. 5 d. 2

39. How do you get the Two's Complement from the One's Complement?

- a. By flipping the bits again.
b. By subtracting(2) 1 from the One's Complement.
c. By adding(2) 1 to the One's Complement.
d. By ignoring the leading digit.

40. When subtracting using complements, what should you do with the final carry digit?

- a. Add it to the next digit. b. Multiply it by two.
c. Leave it as it is. d. Ignore it.

41. Based on the example in the file, what is the Two's Complement of the binary number 0101(2)?

- a. 1010(2) b. 1011(2) c. 0101(2) d. 0001(2)

42. What is the 9's Complement of the number 635?

- a. 635 b. 365 c. 463 d. 364

43. In the binary system, what do you do to each bit to find the One's Complement?

- a. Multiply it by 2. b. Subtract it from 10.

c. Invert it (flip it) from 0 to 1 and 1 to 0.

d. Add 1 to it.

44. In subtraction using complements, you must first find the complement of the: a. Subtracted from. b. Subtrahend c. Final result. d. Leading digit.

45. In the decimal subtraction $8 - 6$ using complements, you add 8 to the 10's complement of 6 (which is 4). What is the result of this addition before you ignore the carry digit?

a. 2

b. 4

c. 12

d. 8

46. In the image digitization process, what is the unit, expressed in (dpi), that determines the image's resolution and clarity during sampling?

a. Encoding

b. Quantization

c. Resolution

d. The Pixel

47. In usability techniques, what is the experience or emotional effect users get from interacting with a product or service?

a. User Interface (UI)

b. Graphical User Interface (GUI)

c. User Experience (UX)

d. Affordance

48. What is the main disadvantage of the Bitmap format compared to the Vector format

a. It reduces the number of pixels in the image.

b. It only allows for representing text and shapes

c. It causes symbols to appear unreadable when printed.

d. Jaggies appear when the image is enlarged.

49. According to the LATCH principle, which type of classification is based on the sequence of events over time?

a. Location

b. Alphabet

c. Time

d. Category

50. What is the term that refers to visually representing data to make it more understandable, with examples including tables, charts, etc.?

- a. Abstraction b. Pictogram c. Structuring d. Visualization

51. In the 24-bit full color system, what is the number of color levels that can be represented for a single primary color (like Red)?

- a. 8 b. 24 levels c. 256 levels d. 224 levels

52. What is the concept that refers to how easily data and services can be accessed by a wide range of people, including those with special needs?

- a. Affordance b. Usability
c. Accessibility d. Universal design

53. What are the three primary colors of light which, when mixed, increase in brightness and approach white?

- a. Cyan, Magenta, and Yellow b. Red, Green, and Blue
c. Violet, Yellow, and Black d. White, Gray, and Black

54. The smallest unit that defines the shape of a digital image, where the image is represented by its arrangement, is

- a. Resolution unit (dpi) b. The Pixel
c. Sampling d. Encoding

55. What is the interface where icons and buttons are used in an easy-to-understand way to exchange information between humans and devices?

- a. Command Line Interface (CUI) b. User Interface (UI)
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56. If the image size in pixels is X pixels (vertical) $\times$ Y pixels (horizontal), and each pixel is represented by Z bits, what is the correct equation that represents the data size (in bits)?

- a) $X \times Y$ b) $X \times Y \times Z$ c) $Z + (X \times Y)$
d) $X \times Y \times \{\text{Number of primary colors}\}$

57. According to the LATCH principle, which type of classification is based on the differences between things and is used as an axis to distinguish domains?

- a. Location b. Alphabet c. Time d. Category

58. A computer consists of five main components, which are

- a) Control Unit, Arithmetic Unit, Memory Unit, Input Unit, Output Unit.
b) Screen, Mouse, Printer, Keyboard, Storage Unit.
c) Processor, Motherboard, Battery, Hard Drive, Screen.
d) Input Unit, Output Unit, Network Unit, Cooling Unit, Arithmetic Unit.

59. Examples of input units:

- a) Screen and Printer. b) Keyboard and Scanner.
c) Hard Drive and SSD. d) Speakers and Wireless Mouse.

60. The connection standard that transmits audio and video over a single cable is: a) USB b) HDMI c) Ethernet d) VGA

61. The relationship between the five computer components depends on:

- a) Data flow and control flow between the units.
b) Only the speed of the hard drive.
c) Screen size and display resolution.
d) The type of operating system used.

62. The Control Unit and the Arithmetic Unit are known together as

- a) Input Unit. b) Memory Unit.
c) Central Processing Unit (CPU). d) Storage Unit.

63. Examples of input units:

- a) Screen and Printer. b) Keyboard and Scanner.

c) Hard Drive and SSD.

d) Speakers and Wireless Mouse.

64. The standard used to connect computers within Local Area Networks (LAN) is: a) HDMI. b) Bluetooth. c) Ethernet. d) USB.

65. USB is typically used to connect:

- a) Network devices only.
- b) Peripheral devices such as printers and keyboards.
- c) Internal storage units.
- d) Audio systems only.

66. The function of the Control Unit is:

- a) Executing instructions and issuing commands to the other units.
- b) Storing data temporarily.
- c) Processing data only.
- d) Outputting the final information

67. Secondary memory is used for:

- a) Storing data temporarily.
- b) Executing instructions quickly.
- c) Long-term storage of data and programs.
- d) Controlling data flow.

68. Programs and data are stored temporarily in:

- a) Main memory.
- b) Secondary memory.
- c) Arithmetic Unit.
- d) Input Unit.

69. What is meant by an "Interface"?

- a) A program that manages hardware.
- b) A component that mediates information exchange between the computer and peripheral devices.
- c) An internal storage unit.
- d) The operating system for peripheral devices.

70. Which of the following is considered a hardware component?

- a) Operating System
- b) Internet Browser
- c) Excel Application
- d) Central Processing Unit (CPU)

71. What is meant by Software?

- a) The hardware devices of the computer
- b) The programs and data that run on the hardware
- c) Only the computer's memory
- d) The network components

72. Which of the following is considered system software?

- a) Operating System
- b) Excel program
- c) PowerPoint program
- d) Browser application

73. What is the function of the operating system?

- a) Increase internet speed
- b) Control hardware functions and run programs
- c) Only save files
- d) Temporarily shut down the computer

74. Which of the following is an example of hardware?

- a) Mouse
- b) Word program
- c) Operating System
- d) Messaging application

75. What does the term "Hardware" refer to?

- a) Software
- b) Digital data
- c) The hardware devices of the computer
- d) Programing instructions

76. System software is used to:

- a) Operate and manage hardware
- b) Create documents
- c) Play video clips
- d) Browse the internet

77. Which of the following is not system software?

- a) Windows
- b) macOS
- c) Photoshop
- d) Linux

78. What is the relationship between hardware and software?

- a) Hardware runs without software
- b) Software runs on hardware to operate the computer
- c) There is no relationship between them
- d) Hardware is a part of software

79. Which of the following is considered application software?

- a) Word
- b) Windows
- c) BIOS
- d) Linux

80. What controls the communication between hardware and software?

- a) The Operating System
- b) The user
- c) The input unit
- d) The screen

81. What is meant by "System Software"?

- a) Programs used directly by the user
- b) Programs that control the operation of hardware and other programs
- c) Programs for designing images
- d) Programs for browsing the web

82. What is meant by a Logical Operation?

- a. A calculation using decimal numbers

- b. An operation performed using binary numbers 0 and 1
- c. A graphical process for drawing circuits
- d. A process of storing data in memory

83. A Logic Circuit is used for:

- a. Converting signals into images
- b. Executing logical operations
- c. Storing data
- d. Sending data over the internet

84. Which of the following gates outputs (1) only when all inputs are (1)?

- a. OR
- b. AND
- c. NOT
- d. XOR

85. Which of the following describes the Inverter (NOT) circuit?

- a. It outputs the same value as the input
- b. It outputs the opposite of the input value
- c. It outputs the sum of the inputs
- d. It does not output any value

86. Which of the following describes the function of an OR gate?

- a. It outputs 1 only when all inputs are 1
- b. It outputs 1 if at least one input is 1
- c. It always outputs 0
- d. It outputs 1

87. when the inputs are equal 2. A Truth Table is used for:

- a. Storing data
- b. Showing the outputs for all possible input combinations
- c. Drawing circuits
- d. Translating programs

88. What is the output of an AND gate if the inputs are (1 and 0)?

a. 0 b. 1 c. 2 d. Nothing

89. What is the function of a Half Adder circuit?

- a. Adding two decimal numbers b. Adding two single-bit binary numbers
- c. Subtracting two numbers d. Converting one number to another

90. A Half Adder circuit consists of:

- a. An AND gate and an OR gate b. An AND gate and a NOT gate
- c. An AND gate and an XOR gate d. An OR gate and a NOT gate

91. What is the difference between a Half Adder and a Full Adder?

- a. The Full Adder accounts for the Carry-in
- b. The Half Adder is faster at calculation
- c. The Full Adder uses only one input
- d. The Half Adder only works for logical operations

92. In a Full Adder circuit, the number of inputs is:

- a. 2 b. 3 c. 4 d. 1 4.

93- Which of the following is NOT a component of a Full Adder circuit?

- a. AND b. OR c. XOR d. NAND

94. What is the output of a NOT circuit if the input = 1?

- a. 0 b. 1 c. 2 d. Nothing

95 In the truth table for an OR gate, when the inputs are (0 and 0), the output is:

- a. 0 b. 1 c. Depends on the gate d. Undefined

96. What is the logical symbol for an AND gate

- a. V b. $\wedge$ c. $\neg$ d. +

97. In a Full Adder circuit, the symbol C refers to:

- a. Carry b. Sum c. A third input d. Power line

98. The function of a truth table is to:

- a. Show all possible input and output combinations
b. Save programming commands
c. Analyze images d. Display only binary values

99. The circuit that outputs the opposite of the input is called:

- a. OR b. NOT c. AND d. XOR

100. A Full Adder circuit handles:

- a. Only one bit b. Two bits and three inputs
c. Two bits and only two inputs d. Four inputs

1-1. When adding 1 and 1 in the binary system, the result is:

- a. 0 b. 1 c. 10 d. 11

102. The function of a Half Adder circuit is to calculate:

- a. The Sum only b. Both the Sum and the Carry
c. Subtraction d. Division

103. The logic circuit that outputs 1 only when the inputs are different is called:

- a. XOR b. OR c. AND d. NOR

104. Which of the following describes a Full Adder?

- a. It includes only two inputs
b. It includes 3 inputs and produces two outputs (Sum and Carry)
c. It produces only one output d. It does not contain an XOR gate

105. In logic circuits, the value (1) means:

- a. False b. True c. Null d. Off

106. Knowledge means:

- A) Copying information.
- B) Analyzing and organizing information to solve problems.
- C) Raw data.
- D) Rumors.

107. Which of the following malware replicates itself and spreads across the internet?

- A) Trojan Horse
- B) Worm
- C) Spyware
- D) Ransomware

108. The basic unit of information is:

- A) 1 Megabyte
- B) 1 Kilobyte
- C) 1 Byte
- D) 1 Bit

109. Which of the following is considered a violation of information ethics?

- A) Verifying sources.
- B) Publishing copyrighted images without permission.
- C) Respecting privacy.
- D) Avoiding cyberbullying.

110. The duration of protection for patents is:

- A) 7 years
- B) 10 years
- C) 20 years
- D) 50 years

111. The number of possible combinations to represent 3 bits is:

- A) 2
- B) 4
- C) 8
- D) 16

112. Which of the following rights protects the economic interests of celebrities?

- A) Right to privacy.
- B) Image rights.
- C) Right of publicity (or Publicity Rights).
- D) Copyrights.

113. Which of the following cybercrimes relies on using another person's username or password?

- A) Network crimes.
- B) Violation of the unauthorized access law.

C) Manipulation of stored data.

D) Phone fraud.

114. Which of the following is an example of knowledge-based authentication?

A) Fingerprint.

B) Smart card.

C) Password and PIN code.

D) SMS verification.

115. Which of the following is an example of digital character encoding?

A) ASCII

B) Sans-serif

C) Semi-cursive

D) Font

116. The hexadecimal code for the character "H" in the string "Hello" is:

A) 65

B) 48

C) 6C

D) 6F

117. What is the ten's complement of the number 635 in the decimal system?

A) 365

B) 365

C) 375

D) 39

118. Which of the following elements is essential for displaying characters on a computer screen?

A) Font only.

B) Encoding only.

C) Encoding + Font.

D) Hexadecimal system.

119. Which of the following causes character corruption?

A) Mismatch between encoding and decoding systems.

B) Slow computer speed.

C) Different font types.

D) Low Random Access Memory (RAM).

120. In computers, the subtraction operation is performed using:

A) Addition using complements

B) Multiplication by the complement of the number

C) Conversion to the decimal system

D) Direct subtraction

121. The character "H" in the string "Hello" is represented in hexadecimal by the code:

- A) C6 B) 65 C) 48 D) F6

122. To display characters on a computer screen, we need:

- A) Font only B) Encoding only
C) Encoding and Font together D) Hexadecimal encoding only

123. What is the ten's complement of the number 71 in the decimal system?

- A) 18 B) 29 C) 29 D) 3

Put a checkmark (✓) next to the correct statement and an X (✗) next to the incorrect statement:

1. Data is raw facts represented by numbers, letters, or symbols. (✓)
2. One characteristic of information is that it disappears completely after being published on the internet. (✗)
3. Secondary information is obtained from a third party, such as books and newspapers. (✓)
4. Examples of media of expression include: texts, images, and video. (✓)
5. Media literacy means the ability to accurately interpret information from media. (✓)
6. Respecting copyright and privacy is an aspect of information ethics. (✓)
7. Internet addiction and using a phone while walking are problems associated with smartphones. (✓)
8. Sensitive personal data includes: race, religion, and health status. (✓)
9. Privacy policies in companies aim to clarify how customer data is collected and protected. (✓)
10. Intellectual property rights are divided into industrial property rights and copyright rights. (✓)
11. The principle of registration means that copyright is only established after the work is officially registered. (✗)
12. Industrial property rights include: patents and trademarks. (✓)
13. Copyright is established at the moment the work is created and does not require registration (✓)
14. One of the essential elements of information security is confidentiality, integrity, and availability. (✓)

15. Ransomware is used to protect data and prevent loss. (X)
16. A password is a string of characters used to verify that a user is legitimate (✓)
17. It is preferable for the password to be short so that it is easy to remember (X)
18. Biometric authentication relies on characteristics such as fingerprints and irises. (X)
19. In two-factor authentication, two different types of factors are used for Verification (✓)
20. A bit can represent more than two states at the same time. (X)
21. 1 byte equals 8 bits and can represent 256 different probabilities (✓)
22. The hexadecimal system uses numbers from 0 to 9 and letters from A to F (✓)
23. When converting from binary to hexadecimal, the binary number is divided into groups of 8 bits. (X)
24. ASCII code supports all languages, including Arabic. (X)
25. Unicode standard was designed to collect character symbols from different world languages into one system. (✓)
26. Encoding is the process of converting digital data into readable Characters (✓)
27. Font is the shape data of characters corresponding to character symbols (✓)
28. A character code is a unique numerical value assigned to each character or Symbol (✓)

29. The ASCII system supports all the world's languages, including Arabic (X)
30. The Unicode standard aims to unify the representation of all characters in the world's languages (✓)
31. Encoding is the process of converting numbers into readable characters. (X)
32. When adding two binary digits $(1 + 1)_{(2)}$ the result is $(10)_{(2)}$ in the binary system. (✓)
33. In binary subtraction, borrowing is done from the higher digit when the current value is not sufficient for subtraction. (✓)

Choose the correct answer:

1. Which of the following represents "information"?

- A) Raw facts. B) Something that has meaning or value for the recipient.
- C) Unintelligible symbols. D) Numbers only.

2. Knowledge means:

- A) Copying information.
- B) Analyzing and organizing information to solve problems.
- C) Raw data. D) Rumors.

3. Which of the following is considered a source of primary information?

- A) A textbook. B) A personal experience report.
- C) A daily newspaper. D) A television program.

4. Media of transmission or broadcasting include:

- A) DVDs. B) Television. And radio.

C) Texts and images.

D) Cloud storage.

5. Which of the following is a violation of information ethics?

A) Verifying sources.

B) Publishing copyrighted images without permission.

C) Respecting privacy.

D) Not cyberbullying.

6. Which of the following is considered identity theft?

A) Sharing a video.

B) Impersonating someone else to steal accounts.

C) Using a phone while walking.

D) Spreading rumo

7. Which of the data Which of the following is considered basic data?

A) National ID number.

B) Iris scan.

C) Date of birth.

D) Health status.

8. Which of the following rights protects the economic interests of celebrities?

A) Right to privacy.

B) Image rights.

C) Publicity rights.

D) Copyright.

9. The license that companies obtain from the regulatory body to ensure their compliance with data protection is called:

A) Objection system.

B) Privacy policy.

C) Personal data protection center license.

D) Prior consent system.

10. The patent protection period is:

A) 7 years

B) 10 years

C) 20 years

D) 50 years

11. Which of the following is considered a neighboring right to copyright?

A) Design rights

B) Performers' rights, such as singers and actors

C) Trademark rights

D) Utility model rights

12. Which Creative Commons license allows the use of the work provided the author's name is mentioned?

A) (NC) (Non-commercial)

B) (ND) (No derivatives)

C) (BY) (Attribution to the creator)

D) (SA) (Same conditions) For modifications

13. Which type of malware replicates itself and spreads across the internet?

A) Trojan horse

B) Worm

C) Spyware

D) Ransomware

14. Which cybercrime relies on using someone else's username or password?

A) Network crimes

B) Violation of unauthorized access laws

C) Manipulation of stored data

D) Telephone fraud

15. The purpose of copyright is to:

A) Ensure fair use and protect rights.

B) Prevent all forms of quotation.

C) Allow infringement of intellectual property rights. Intellectual property.

d) Use of the works for commercial purposes only.

16. One-Time Password (OTP) means:

a) A password that never changes.

b) A password that can be used multiple times.

c) A password that changes periodically and is used only once.

d) A password based on the date of birth.

17. Which of the following is an example of knowledge-based authentication? a) Fingerprint. b) Smart card. c) Password and PIN. d) SMS verification.

18. Two-step authentication relies on:

a) Two different types of factors.

b) Two pieces of information of the same type of factor.

c) Fingerprint + password.

d) SMS code + smart card.

19. The number of possible probabilities to represent 3 bits is:

a) 2

b) 4

c) 8

d) 16

20. the basic unit of information is:

a) 1 megabyte

b) 1 kilobyte

c) 1 byte

d) 1 bit

21. When converting the binary number 1011(2) to decimal, the result is:

a) 10

b) 11

c) 12

d) 13

22. The binary number 10011010(2) is equivalent to which in the hexadecimal system:

a) 9A₍₁₆₎

b) A9₍₁₆₎

c) 19₍₁₆₎

d) 91₍₁₆₎

23. When converting the hexadecimal number A4(16) to binary, the result is:

a) 10011010₍₂₎

b) 10100100₍₂₎

c) 11001001₍₂₎

d) 11100011₍₂₎

24. Which of the following is an example of digital character encoding?

a) ASCII

b) Sans-serif

c) Semi-cursive

d) Font

25. One of the causes of character corruption is:

a) Weak processor speed.

b) Mismatch between encoding and decoding methods.

c) Low storage capacity.

d) Different font types.

26. Which of the following elements are necessary to display characters on a computer screen?

a) Font only.

b) Encoding only.

c) Encoding + Font.

d) Hexadecimal system.

27. The letter "H" in the string "Hello" is represented in the hexadecimal system by the symbol:

- a) 6C b) 65 c) 48 d) 6F

28. The letter "H" in the string "Hello" is represented in the hexadecimal system by the symbol:

- a) 65 b) 48 c) 6C d) 6F 4)

29. Which of the following is not a character encoding system?

- a) ASCII b) Unicode c) UTF-8 d) BIOS

30. Which of the following causes character corruption?

- a) A mismatch between the encoding and decoding systems.
b) Weak processor speed.
c) Different font types. d) Lack of random access memory (RAM).

31. In binary addition, the result of $1(2) + 1(2)$ is:

- a) 0 with a carry of 1 b) 10 (2) c) 2 (2) d) 11 (2)

32. The result of the binary subtraction $1010_{(2)} - 0110_{(2)}$ is:

- a) 0010₍₂₎ b) 0100₍₂₎ c) 0110₍₂₎ d) 1000₍₂₎

33. To display characters on a computer screen, we need:

- a) Font only . b) Encoding only. c) Encoding + Font together.
d) Hexadecimal system only.

34. What is the relationship between the 9's Complement and the 10's Complement?

- a. The 10's Complement is the 9's Complement minus 1.
b. The 10's Complement is the 9's Complement plus 1.
c. The 10's Complement is the 9's Complement multiplied by 10.
d. The 10's Complement is the 9's Complement divided by 10.

35. What is the One's Complement of the binary number 0101?

- a. 0101 (2) b. 1011 (2) c. 1010(2) d. 0110 (2)

36. In the method of subtraction using complements, which operation does a computer use instead of subtraction?

- a. Multiplication b. Division c. Addition d. Subtraction

37. To calculate the 10's complement of the number 29, you first find its 9's complement, which is 70. What is the 10's Complement?

- a. 70 b. 71 c. 69 d. 80

38. To calculate the 9's Complement of a decimal number, you subtract each digit from:

- a. 10 b. 9 c. 5 d. 2

39. How do you get the Two's Complement from the One's Complement?

- a. By flipping the bits again.
b. By subtracting(2) 1 from the One's Complement.
c. By adding(2) 1 to the One's Complement.
d. By ignoring the leading digit.

40. When subtracting using complements, what should you do with the final carry digit?

- a. Add it to the next digit. b. Multiply it by two.
c. Leave it as it is. d. Ignore it.

41. Based on the example in the file, what is the Two's Complement of the binary number 0101(2)?

- a. 1010(2) b. 1011(2) c. 0101(2) d. 0001(2)

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- a. 635 b. 365 c. 463 d. 364

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- c. Invert it (flip it) from 0 to 1 and 1 to 0.
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c. Violet, Yellow, and Black d. White, Gray, and Black Third test

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60. The relationship between the five computer components depends on:

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 c) Screen size and display resolution.
 d) The type of operating system used.

61. The Control Unit and the Arithmetic Unit are known together as

- a) Input Unit. b) Memory Unit.
 c) **Central Processing Unit (CPU).** d) Storage Unit.

62. Examples of input units:

- a) Screen and Printer. b) **Keyboard and Scanner.**

c) Hard Drive and SSD.

d) Speakers and Wireless Mouse.

63. The standard used to connect computers within Local Area Networks (LAN) is: a) HDMI. b) Bluetooth. c) Ethernet. d) USB.

64. USB is typically used to connect:

a) Network devices only.

b) Peripheral devices such as printers and keyboards.

c) Internal storage units.

d) Audio systems only.

65. The function of the Control Unit is:

a) Executing instructions and issuing commands to the other units.

b) Storing data temporarily.

c) Processing data only.

d) Outputting the final information

66. Secondary memory is used for:

a) Storing data temporarily.

b) Executing instructions quickly.

c) Long-term storage of data and programs.

d) Controlling data flow.

67. Programs and data are stored temporarily in:

a) Main memory.

b) Secondary memory.

c) Arithmetic Unit.

d) Input Unit.

68. What is meant by an "Interface"?

a) A program that manages hardware.

b) A component that mediates information exchange between the computer and peripheral devices.

c) An internal storage unit.

d) The operating system for peripheral devices.

69. Which of the following is considered a hardware component?

- a) Operating System
- b) Internet Browser
- c) Excel Application
- d) Central Processing Unit (CPU)

70. What is meant by Software?

- a) The hardware devices of the computer
- b) The programs and data that run on the hardware
- c) Only the computer's memory
- d) The network components

71. Which of the following is considered system software?

- a) Operating System
- b) Excel program
- c) PowerPoint program
- d) Browser application

72. What is the function of the operating system?

- a) Increase internet speed
- b) Control hardware functions and run programs
- c) Only save files
- d) Temporarily shut down the computer

73. Which of the following is an example of hardware?

- a) Mouse
- b) Word program
- c) Operating System
- d) Messaging application

4. What does the term "Hardware" refer to?

- a) Software
- b) Digital data
- c) The hardware devices of the computer
- d) Programing instructions

75. System software is used to:

- a) **Operate and manage hardware**
- b) Create documents
- c) Play video clips
- d) Browse the internet

76. Which of the following is not system software?

- a) Windows
- b) macOS
- c) **Photoshop**
- d) Linux

77. What is the relationship between hardware and software?

- a) Hardware runs without software
- b) **Software runs on hardware to operate the computer**
- c) There is no relationship between them
- d) Hardware is a part of software

78. Which of the following is considered application software?

- a) **Word**
- b) Windows
- c) BIOS
- d) Linux

79. What controls the communication between hardware and software?

- a) **The Operating System**
- b) The user
- c) The input unit
- d) The screen

80. What is meant by "System Software"?

- a) Programs used directly by the user
- b) **Programs that control the operation of hardware and other programs**
- c) Programs for designing images
- d) Programs for browsing the web

81. What is meant by a Logical Operation?

- a. A calculation using decimal numbers
- b. An operation performed using binary numbers 0 and 1**
- c. A graphical process for drawing circuits
- d. A process of storing data in memory

82. A Logic Circuit is used for:

- a. Converting signals into images
- b. Executing logical operations**
- c. Storing data
- d. Sending data over the internet

83. Which of the following gates outputs (1) only when all inputs are (1)?

- a. OR
- b. AND
- c. NOT
- d. XOR

84. Which of the following describes the Inverter (NOT) circuit?

- a. It outputs the same value as the input
- b. It outputs the opposite of the input value**
- c. It outputs the sum of the inputs
- d. It does not output any value

85. Which of the following describes the function of an OR gate?

- a. It outputs 1 only when all inputs are 1
- b. It outputs 1 if at least one input is 1**
- c. It always outputs 0
- d. It outputs 1

86. when the inputs are equal 2. A Truth Table is used for:

- a. Storing data
- b. Showing the outputs for all possible input combinations**
- c. Drawing circuits
- d. Translating programs

87. What is the output of an AND gate if the inputs are (1 and 0)?

a. 0 b. 1 c. 2 d. Nothing

88. What is the function of a Half Adder circuit?

- a. Adding two decimal numbers b. Adding two single-bit binary numbers
c. Subtracting two numbers d. Converting one number to another

89. A Half Adder circuit consists of:

- a. An AND gate and an OR gate b. An AND gate and a NOT gate
c. An AND gate and an XOR gate d. An OR gate and a NOT gate

90. What is the difference between a Half Adder and a Full Adder?

- a. The Full Adder accounts for the Carry-in
b. The Half Adder is faster at calculation
c. The Full Adder uses only one input
d. The Half Adder only works for logical operations

91. In a Full Adder circuit, the number of inputs is:

- a. 2 b. 3 c. 4 d. 14.

92. Which of the following is NOT a component of a Full Adder circuit?

- a. AND b. OR c. XOR d. NAND

93. What is the output of a NOT circuit if the input = 1?

- a. 0 b. 1 c. 2 d. Nothing

94. In the truth table for an OR gate, when the inputs are (0 and 0), the output is:

- a. 0 b. 1 c. Depends on the gate d. Undefined

95. What is the logical symbol for an AND gate

- a. V b. $\wedge$ c. $\neg$ d. +

96. In a Full Adder circuit, the symbol C refers to:

- a. Carry b. Sum c. A third input d. Power line

97. The function of a truth table is to:

- a. Show all possible input and output combinations
b. Save programming commands
c. Analyze images d. Display only binary values

98. The circuit that outputs the opposite of the input is called:

- a. OR b. NOT c. AND d. XOR

99. A Full Adder circuit handles:

- a. Only one bit b. Two bits and three inputs
c. Two bits and only two inputs d. Four inputs

100. When adding 1 and 1 in the binary system, the result is:

- a. 0 b. 1 c. 10 d. 11

101. The function of a Half Adder circuit is to calculate:

- a. The Sum only b. Both the Sum and the Carry
c. Subtraction d. Division

102. The logic circuit that outputs 1 only when the inputs are different is called:

- a. XOR b. OR c. AND d. NOR

103. Which of the following describes a Full Adder?

- a. It includes only two inputs
b. It includes 3 inputs and produces two outputs (Sum and Carry)
c. It produces only one output d. It does not contain an XOR gate

104. In logic circuits, the value (1) means:

- a. False b. True c. Null d. Off

105. Knowledge means:

- A) Copying information.
- B) Analyzing and organizing information to solve problems.**
- C) Raw data.
- D) Rumors.

106. Which of the following malware replicates itself and spreads across the internet?

- A) Trojan Horse
- B) Worm**
- C) Spyware
- D) Ransomware

107. The basic unit of information is:

- A) 1 Megabyte
- B) 1 Kilobyte
- C) 1 Byte
- D) 1 Bit**

108. Which of the following is considered a violation of information ethics?

- A) Verifying sources.
- B) Publishing copyrighted images without permission.**
- C) Respecting privacy.
- D) Avoiding cyberbullying.

109. The duration of protection for patents is:

- A) 7 years
- B) 10 years
- C) 20 years**
- D) 50 years

110. The number of possible combinations to represent 3 bits is:

- A) 2
- B) 4
- C) 8**
- D) 16

111. Which of the following rights protects the economic interests of celebrities?

- A) Right to privacy.
- B) Image rights.
- C) Right of publicity (or Publicity Rights).**
- D) Copyrights.

112. Which of the following cybercrimes relies on using another person's username or password?

- A) Network crimes.
- B) Violation of the unauthorized access law.**

C) Manipulation of stored data.

D) Phone fraud.

132. Which of the following is an example of knowledge-based authentication?

A) Fingerprint.

B) Smart card.

C) Password and PIN code.

D) SMS verification.

114. Which of the following is an example of digital character encoding?

A) ASCII

B) Sans-serif

C) Semi-cursive

D) Font

115. The hexadecimal code for the character "H" in the string "Hello" is:

A) 65

B) 48

C) 6C

D) 6F

116. What is the ten's complement of the number 635 in the decimal system?

A) 366

B) 365

C) 375

D) 395

117. Which of the following elements is essential for displaying characters on a computer screen?

A) Font only.

B) Encoding only.

C) Encoding + Font.

D) Hexadecimal system.

118. Which of the following causes character corruption?

A) Mismatch between encoding and decoding systems.

B) Slow computer speed.

C) Different font types.

D) Low Random Access Memory (RAM).

119. In computers, the subtraction operation is performed using:

A) Addition using complements

B) Multiplication by the complement of the number

C) Conversion to the decimal system

D) Direct subtraction

120. The character "H" in the string "Hello" is represented in hexadecimal by the code:

- A) C6 B) 65 C) 48 D) F6

1 To display characters on a computer screen, we need:

- A) Font only B) Encoding only
C) Encoding and Font together D) Hexadecimal encoding only

122. What is the ten's complement of the number 71 in the decimal system?

- A) 18 B) 29 C) 29 D) 3

حمل الآن

مجاناً وحصرياً

المراجعة رقم (3)

الترم الاول



Put (✓) in front of the correct statement and (X) in front of the incorrect one:

1. Data are raw facts represented in the form of numbers, letters, or symbols. (✓)
2. One of the characteristics of information is that it completely disappears after being published on the Internet. (X)
3. Secondary information is obtained from three parties such as books and research. (✓)
4. Videos, pictures, and texts are examples of Expression media. (✓)
5. Information literacy means the ability to interpret information accurately. (✓)
6. Respecting copyright and privacy is part of information ethics. (✓)
7. Internet addiction and using a phone while walking is among the problems related to smartphones. (✓)
8. Religion, health condition, and race are considered sensitive personal data. (✓)
9. Privacy policies in companies aim to explain how customer data is collected and protected. (✓)
10. Intellectual property rights are divided into industrial property rights and copyright. (✓)
11. Industrial property rights include patent Right and trademarks. (✓)
12. Confidentiality, integrity, and availability are essential elements of information security. (✓)
13. Ransomware is used to protect data and prevent loss. (X)
14. A password is a string of characters used to verify that a user is legitimate. (✓)
15. It is preferable for the password to be short so that it is easy to remember. (X)
16. Biometric authentication relies on characteristics such as fingerprints and irises. (✓)
17. In two-factor authentication, two different types of factors are used for verification. (✓)
18. A bit can represent more than two states at the same time. (X)
19. 1 byte equals 8 bits and can represent 256 different probabilities. (✓)
20. The hexadecimal system uses numbers from 0 to 9 and letters from A to F. (✓)
21. When converting from binary to hexadecimal, the binary number is divided into groups of 8 bits. (X)
22. ASCII code supports all languages, including Arabic. (X)



23. Unicode standard was designed to collect character symbols from different world languages into one system. (✓)

24. Encoding is the process of converting digital data into readable characters. (X)

25. Font is the shape data of characters corresponding to character symbols. (✓)

26. The result of the following binary operation: $1010 + 0101$ is 1111 (✓)

27. A character code is a unique numerical value assigned to each character or symbol. (✓)

28. The Unicode standard aims to unify the representation of all characters in the world's languages. (✓)

29. When adding two binary digits ($1 + 1$), the result is (10) in the binary system. (✓)

30. In binary subtraction, borrowing is done from the higher digit when the current value is not sufficient for subtraction. (✓)

Choose the correct answer:

1. Which of the following represents 'Information'?

A) Raw facts

C) Unclear symbol

B) Something that carries meaning or value to the recipient

D) Only numbers

2. Knowledge means:

A) Copying information

C) Raw data

B) Organizing and analyzing information to solve problems

D) Rumors

3. Which of the following is considered a primary source of information?

A. School textbook

C) Daily newspaper

B. A personal experience report

D) Television program

4. propagation and transmission media include:

A. DVD Discs

C) Pictures and Texts

B. Radio and Television

D) Cloud Storage

5. Which of the following is considered a violation of information ethics?

A) Verifying sources

B) Publishing copyrighted pictures without permission

C) Respecting privacy

D) Not using electronic passwords

6. Which of the following is considered identity theft?

A) Sharing a video

B) Pretending to be someone else and stealing their account

C) Using a phone while walking

D) Spreading rumors



7. Which of the following is considered basic personal data?

- A. National ID number
- B. Fingerprint
- C. Date of birth
- D. Health condition

8. Which of the following rights protects the economic interests of creators?

- A. Privacy rights
- B. Copyrights
- C. Advertising rights
- D. Publishing rights

9. The license that organizations obtain to confirm their commitment to data protection is called:

- A. Objection system
- B. Privacy policy
- C. Personal Data Protection License
- D. Prior consent system

10. Which of the following is considered secondary information?

- A. Results of a new survey
- B. Reports of personal experiences
- C. A published scientific book
- D. Field survey

11. Which of the following rights is recognized by law and the judiciary?

- A. Publishing rights
- B. Copyrights
- C. Intellectual property rights
- D. Privacy rights

12. The system that requires explicit consent from the user before providing a service is called:

- A. Objection system
- B. Privacy policy
- C. Prior consent system
- D. License

13. The Patent Rights protection period is:

- A. 7 years
- B. 10 years
- C. 20 years
- D. 50 years

14. Which of the following is considered a neighboring right to copyright?

- A. Design rights
- B. Performers' rights such as singers and actors
- C. Trademark rights
- D. Utility model rights

15. Which of the Creative Commons licenses allows the use of a work provided the author's name is mentioned?

- A. Non-commercial (NC)
- B. No derivatives (ND)
- C. Credit to creator (BY)
- D. Same terms for adaptations (SA)

16. Which of the following malware replicates itself and spreads over the internet?

- A. Trojan horse
- B. Worm
- C. Spyware
- D. Ransomware



17. Which of the following cybercrimes depends on using another person's username or password?

A. Cybercrimes

B. Violation of unauthorized access law

C. Manipulation of stored data

D. Phone fraud

18. The purpose of copyright is:

A. Ensuring fair use and protecting rights

B. Preventing all forms of quotation

C. Allowing infringement of intellectual property rights

D. Using works for commercial purposes only

19. Which of the industrial property rights protects the external form or structure of a product?

A. Trademark rights

B. Design rights

C. Utility model rights

D. Patent

20. The protection period of copyright lasts:

A. The lifetime of the creator only

B. 20 years from the date of publication

C. The creator's lifetime + 50 years after death

D. A fixed 100 years

21. Which of the following threats collects personal information without the user's knowledge?

A. Ransomware

C. Viruses

B. Spyware

D. Trojan horse

22. One-Time Password (OTP) means:

a) A password that never changes.

b) A password that can be used multiple times.

c) A password that changes periodically and is used only once.

d) A password based on the date of birth.

23. Which of the following is an example of knowledge-based authentication?

a) Fingerprint.

b) Smart card.

c) Password and PIN.

d) SMS verification



24. Two-step authentication relies on:

- a) Two different types of factors.
- b) Two pieces of information of the same type of factor.**
- c) Fingerprint + password.
- d) SMS code + smart card.

25. The basic unit of information is:

- a) 1 megabyte
- b) 1 kilobyte
- c) 1 byte**
- d) 1 bit

26. When converting the binary number 1011(2) to decimal, the result is:

- a) 10
- b) 11**
- c) 12
- d) 13

27. The binary number 10011010(2) is equivalent to which in the hexadecimal system:

- a) 9A (16)**
- b) A9(16)
- c) 19(16)
- d) 91(16)

28. When converting the hexadecimal number A4(16) to binary, the result is:

- a) 10011010(2)
- b) 10100100(2)**
- c) 11001001(2)
- d) 11100011(2)

29. Which of the following is an example of digital character encoding?

- a) ASCII**
- b) Sans-serif
- c) Semi-cursive
- d) Font

30. One of the causes of character corruption is:

- a) Weak processor speed.
- b) Mismatch between encoding and decoding methods.**
- c) Low storage capacity.
- d) Different font types

31. Which of the following elements are necessary to display characters on a computer screen?

- a) Font only.
- b) Encoding only.
- c) Encoding + Font.**
- d) Hexadecimal system.

32. The letter "H" in the string "Hello" is represented in the hexadecimal system by the symbol:

- a) 6C
- b) 65
- c) 48**
- d) 6F

33. The result of the following binary operation: 0101 – 1011 is

- a) 0011
- b) **0110**
- c) 0100
- d) 1110



34. Which of the following is not a character encoding system?

- a) ASCII
- b) Unicode
- c) UTF-8
- d) BIOS**

35. In binary addition, the result of $1(2) + 1(2)$ is:

- a) $0(2)$ with a carry of 1
- b) $10(2)$**
- c) $2(2)$
- d) $11(2)$

36. The result of the binary subtraction $1010(2) - 0110(2)$ is:

- a) $0010(2)$
- b) $0100(2)$**
- c) $0110(2)$
- d) $1000(2)$

37. What is the relationship between the 9's Complement and the 10's Complement?

- a. The 10's Complement is the 9's Complement minus 1.
- b. The 10's Complement is the 9's Complement plus 1.**
- c. The 10's Complement is the 9's Complement multiplied by 10.
- d. The 10's Complement is the 9's Complement divided by 10.

38. What is the One's Complement of the binary number 0101?

- a. 0101 (2)
- b. 1011 (2)
- c. 1010 (2)**
- d. 0110 (2)

39. In the method of subtraction using complements, which operation does a computer use instead of subtraction?

- a. Multiplication
- b. Division
- c. Addition**
- d. Subtraction itself

40. To calculate the 10's complement of the number 29, you first find its 9's complement, which is 70. What is the 10's Complement?

- a. 70
- b. 71**
- c. 69
- d. 80

41. To calculate the 9's Complement of a decimal number, you subtract each digit from:

- a. 10
- b. 9**
- c. 5
- d. 1

42. How do you get the Two's Complement from the One's Complement?

- a. By flipping the bits again.
- b. By subtracting(2) 1 from the One's Complement.
- c. By adding(2) 1 to the One's Complement.**
- d. By ignoring the leading digit.



43. When subtracting using complements, what should you do with the final carry digit?

- a. Add it to the next digit.
- b. Multiply it by two.
- c. Leave it as it is.
- d. Ignore it.**

44. Based on the example in the file, what is the Two's Complement of the binary number 0101(2)?

- a. 1010(2)
- b. 1011(2)**
- c. 0101(2)
- d. 0001(2)

45. What is the 9's Complement of the number 635?

- a. 635
- b. 365
- c. 463
- d. 364**

46. In the binary system, what do you do to each bit to find the One's Complement?

- a. Multiply it by 2.
- b. Subtract it from 10.
- c. Invert it (flip it) from 0 to 1 and 1 to 0.**
- d. Add 1 to it.

47. In subtraction using complements, you must first find the complement of the:

- a. Subtracted from.
- b. Subtrahend**
- c. Final result.
- d. Leading digit.

48. In the decimal subtraction 8 - 6 using complements, you add 8 to the 10's complement of 6 (which is 4). What is the result of this addition before you ignore the carry digit?

- a. 2
- b. 4
- c. 12**
- d. 8

49. In the image digitization process, what is the unit, expressed in (dpi), that determines the image's resolution and clarity during sampling?

- a. Encoding
- b. Quantization
- c. Resolution**
- d. The Pixel

50. In usability techniques, what is the experience or emotional effect users get from interacting with a product or service?

- a. User Interface (UI)
- b. Graphical User Interface (GUI)
- c. User Experience (UX)**
- d. Affordance



51. What is the main disadvantage of the Bitmap format compared to the Vector format?

- a. It reduces the number of pixels in the image.
- b. It only allows for representing text and shapes.
- c. It causes symbols to appear unreadable when printed.
- d. Jaggies appear when the image is enlarged.**

52. According to the LATCH principle, which type of classification is based on the sequence of events over time?

- a. Location
- b. Alphabet
- c. Time**
- d. Category

53. What is the term that refers to visually representing data to make it more understandable, with examples including tables, charts, etc.?

- a. Abstraction
- b. Pictogram
- c. Structuring
- d. Visualization**

54. In the 24-bit full color system, what is the number of color levels that can be represented for a single primary color (like Red)?

- a. 8 levels
- b. 24 levels
- c. 256 levels**
- d. 224 levels

55. What is the concept that refers to how easily data and services can be accessed by a wide range of people, including those with special needs?

- a. Affordance
- b. Usability
- c. Accessibility**
- d. Universal design

56. What are the three primary colors of light which, when mixed, increase in brightness and approach white?

- a. Cyan, Magenta, and Yellow
- b. Red, Green, and Blue**
- c. Violet, Yellow, and Black
- d. White, Gray, and Black

57. The smallest unit that defines the shape of a digital image, where the image is represented by its arrangement, is:

- a. Resolution unit (dpi)
- b. The Pixel**
- c. Sampling
- d. Encoding

58. What is the interface where icons and buttons are used in an easy-to-understand way to exchange information between humans and devices?

- a. Command Line Interface (CUI)
- b. User Interface (UI)
- c. Graphical User Interface (GUI)**
- d. User Experience (UX)



59. If the image size in pixels is X pixels (vertical) $\times$ Y pixels (horizontal), and each pixel is represented by Z bits, what is the correct equation that represents the data size (in bits)?

- a. $X \times Y$
- b. $X \times Y \times Z$
- c. $Z \times (X \times Y)$
- d. $X \times Y \times \{\text{Number of primary colors}\}$

60. According to the LATCH principle, which type of classification is based on the differences between things and is used as an axis to distinguish domains?

- a. Location
- b. Alphabet
- c. Time
- d. Category

61. A computer consists of five main components, which are:

- a) Control Unit, Arithmetic Unit, Memory Unit, Input Unit, Output Unit.
- b) Screen, Mouse, Printer, Keyboard, Storage Unit.
- c) Processor, Motherboard, Battery, Hard Drive, Screen.
- d) Input Unit, Output Unit, Network Unit, Cooling Unit, Arithmetic Unit.

62. Examples of input units:

- a) Screen and Printer.
- b) Keyboard and Scanner.
- c) Hard Drive and SSD.
- d) Speakers and Wireless Mouse.

63. The connection standard that transmits audio and video over a single cable is:

- a) USB
- b) HDMI
- c) Ethernet
- d) VGA

64. The relationship between the five computer components depends on:

- a) Data flow and control flow between the units.
- b) Only the speed of the hard drive.
- c) Screen size and display resolution.
- d) The type of operating system used.

65. The Control Unit and the Arithmetic Unit are known together as:

- a) Input Unit.
- b) Memory Unit.
- c) Central Processing Unit (CPU).
- d) Storage Unit.

66. The standard used to connect computers within Local Area Networks (LAN) is:

- a) HDMI.
- b) Bluetooth.
- c) Ethernet.
- d) USB.



67. USB is typically used to connect:

- a) Network devices only.
- b) Peripheral devices such as printers and keyboards.**
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- c) PowerPoint program
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- c) Play video clips
- d) Browse the internet

79. Which of the following is not system software?

- a) Windows
- b) macOS
- c) Photoshop**
- d) Linux

80. What is the relationship between hardware and software?

- a) Hardware runs without software
- b) Software runs on hardware to operate the computer**
- c) There is no relationship between them
- d) Hardware is a part of software

81. Which of the following is considered application software?

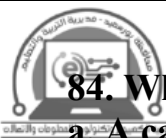
- a) Word**
- b) Windows
- c) BIOS
- d) Linux

82. What controls the communication between hardware and software?

- a) The Operating System**
- b) The user
- c) The input unit
- d) The screen

83. What is meant by "System Software"?

- a) Programs used directly by the user
- b) Programs that control the operation of hardware and other programs**
- c) Programs for designing images
- d) Programs for browsing the web



84. What is meant by a Logical Operation?

- a. A calculation using decimal numbers
- b. An operation performed using binary numbers 0 and 1**
- c. A graphical process for drawing circuits
- d. A process of storing data in memory

85. A Logic Circuit is used for:

- a. Converting signals into images
- b. Executing logical operations**
- c. Storing data
- d. Sending data over the internet

86. Which of the following gates outputs (1) only when all inputs are (1)?

- a. OR
- b. AND**
- c. NOT
- d. XOR

87. Which of the following describes the Inverter (NOT) circuit?

- a. It outputs the same value as the input
- b. It outputs the opposite of the input value**
- c. It outputs the sum of the inputs
- d. It does not output any value

88. Which of the following describes the function of an OR gate?

- a. It outputs 1 only when all inputs are 1
- b. It outputs 1 if at least one input is 1**
- c. It always outputs 0
- d. It outputs 1 when the inputs are equal

89. A Truth Table is used for:

- a. Storing data
- b. Showing the outputs for all possible input combinations**
- c. Drawing circuits
- d. Translating programs

90. What is the output of an AND gate if the inputs are (1 and 0)?

- a. 0**
- b. 1
- c. 2
- d. Nothing

91. What is the function of a Half Adder circuit?

- a. Adding two decimal numbers
- b. Adding two single-bit binary numbers**
- c. Subtracting two numbers
- d. Converting one number to another



92. What is the difference between a Half Adder and a Full Adder?

- a. The Full Adder accounts for the Carry-in**
- b. The Half Adder is faster at calculation
- c. The Full Adder uses only one input
- d. The Half Adder only works for logical operations

93. In a Full Adder circuit, the number of inputs is:

- a. 2
- b. 3**
- c. 4
- d. 1

94. What is the output of a NOT circuit if the input = 1?

- a. 0**
- b. 1
- c. 2
- d. Nothing

95. In the truth table for an OR gate, when the inputs are (0 and 0), the output is:

- a. 0**
- b. 1
- c. Depends on the gate
- d. Undefined

96. In a Full Adder circuit, the symbol C refers to:

- a. Carry**
- b. Sum
- c. A third input
- d. Power line

97. The function of a truth table is to:

- a. Show all possible input and output combinations**
- b. Save programming commands
- c. Analyze images
- d. Display only binary values

98. The circuit that outputs the opposite of the input is called:

- a. OR
- b. NOT**
- c. AND
- d. XOR

99. A Full Adder circuit handles:

- a. Only one bit
- b. Two bits and three inputs**
- c. Two bits and only two inputs
- d. Four inputs

100. When adding 1 and 1 in the binary system, the result is:

- a. 0
- b. 1
- c. 10**
- d. 11

101. The function of a Half Adder circuit is to calculate:

- a. The Sum only**
- b. Both the Sum and the Carry
- c. Subtraction
- d. Division



102. The logic circuit that outputs 1 only when the inputs are different is called:

- a. XOR
- b. OR
- c. AND
- d. NOR

103. Which of the following describes a Full Adder?

- a. It includes only two inputs
- b. It includes 3 inputs and produces two outputs (Sum and Carry)
- c. It produces only one output
- d. It does not contain an XOR gate

104. In logic circuits, the value (1) means:

- a. False
- b. True
- c. Null
- d. Off

105. The number of possible combinations to represent 3 bits is:

- a) 2
- b) 4
- c) 8
- d) 16

حمل الآن

مجاناً وحصرياً

امتحانات رقم (1)

الترم الاول



1 Choose the correct answer from the following:

- 15- Hexadecimal A4₍₁₆₎ in binary is
- a. 10100100 b. 10101001 c. 10010100 d. 11001010
- 2- Hexadecimal is a number system based on
- a. 8 b. 10 c. 12 d. 16
- 3- The standard that consolidates characters from different languages is
- a. ASCII b. Encoding c. Font d. Unicode
- 4- In binary subtraction, borrowing occurs when the is insufficient.
- a. subtrahend b. carry c. minuend d. sum
- 5- The smallest number which, when added to a given natural number, produces a carry to the next higher digit is called
- a. sum b. complement c. difference d. product

2 Put (✓) or (x) in front of each of the following sentences:

- 1- Sound is transmitted through the vibration of air. ()
- 2- The unit of frequency is measured in seconds. ()
- 3- One wave's propagation time is called its period. ()
- 4- Sampling means dividing the vertical axis (voltage) at regular intervals. ()
- 5- Quantization converts sampled wave heights to the nearest level on the vertical scale. ()

3 Complete the following with the suitable words in brackets:

(CPU (central processing unit) – Secondary memory - Peripheral devices
- Output devices - Input devices)

- 1- The combination of the control unit and arithmetic unit is known as the
- 2- Memory used for long-term storage, such as hard disks or SSDs, is called
- 3- Devices that take information from external sources are called
- 4- Devices that display or output information from the computer are called
- 5- Devices like keyboard, mouse, and printer are called

4 Write the scientific concept for each of the following:

- 1- The process of converting digital data into analog data.
- 2- The unit of information equal to 1,024 bytes.
- 3- A number system that uses digits 0-9 and letters A-F.
- 4- The arrangement of bits that represents actual information.
- 5- The process of converting analog data into digital data.

1 Choose the correct answer from the following:

- 1- Conversion from hexadecimal to decimal requires first converting to
- a. Binary b. Octal c. Decimal d. Letters
- 2- Hexadecimal C6₍₁₆₎ in binary is
- a. 11000110 b. 10100110 c. 11100110 d. 10010110
- 3- The phenomenon caused by mismatched encoding and decoding is
- a. Font b. ASCII c. Character corruption d. UTF-8
- 4- In binary addition, a carry is generated when the sum reaches
- a. 1 b. 4 c. 3 d. 2
- 5- In decimal system, the complement used to represent negative numbers is
- a. 2's b. 9's c. 10's d. binary

2 Put (✓) or (x) in front of each of the following sentences:

- 1- At 8 bits per pixel, there are 128 levels from 0 to 127. ()
- 2- Encoding expresses quantized values in binary numbers. ()
- 3- Increasing resolution and gradation decreases image quality. ()
- 4- Higher resolution and gradation increase the data volume of an image. ()
- 5- Raster images may appear jagged when enlarged. ()

3 Complete the following with the suitable words in brackets:

(driver – application – OS – application – Android OS)

- 1- Word processing and spreadsheet programs are examples of software.
- 2- A program that controls communication between a device and software is called a
- 3- Task management, memory management, and file management are functions of the:
- 4- Examples of operating systems include Windows, macOS, and
- 5- Software that operates on top of system software is called software.

4 Write the scientific concept for each of the following:

- 1- The process of changing a binary number into decimal form.
- 2- A system for transferring information between humans and devices.
- 3- The process of changing a decimal number into binary form.
- 4- Data represented using continuous quantities such as mass, time, or temperature.
- 5- Data represented numerically by segmenting values at regular intervals.

1 Choose the correct answer from the following:

- Decimal number 198 equals hexadecimal
a. 7E b. A4 c. 9A d. C6
- Required elements to display characters on screen or printer are
a. Font and code b. Encoding and decoding
c. ASCII and Unicode d. UTF-16
- Each hexadecimal digit represents
a. 2 bits b. 3 bits c. 4 bits d. 5 bits
- Addition and subtraction in binary numbers are performed
a. randomly b. digit by digit
c. in reverse d. by grouping
- The process of inverting 0s to 1s and 1s to 0s, then adding 1 is used to calculate
a. 9's complement b. subtraction c. decimal sum d. 2's complement

2 Put (✓) or (x) in front of each of the following sentences:

- The afterimage phenomenon is unrelated to how videos appear to move. ()
- Each still image in a video is known as a frame. ()
- The term "fps" refers to frames per second. ()
- A lower frame rate produces smoother video playback. ()
- The higher the frame rate, the larger the video data size becomes. ()

3 Complete the following with the suitable words in brackets:

(single-digit - carry, carry - 1, 1 - inverter, opposite - AND, OR)

- An OR gate outputs if at least one of the inputs is
- A NOT circuit, also called an circuit, outputs the result of the input.
- A half adder circuit represents the addition of numbers.
- A half adder is composed of,, and NOT gates.
- A full adder circuit considers from the lower bit and to the higher bit.

4 Write the scientific concept for each of the following:

- The method of representing numbers using two digits, 0 and 1.
- The subscript (16) placed at the bottom right of a number.
- The system of representing numbers using ten digits from 0 to 9.
- A group of four binary digits representing one hexadecimal digit.
- The system of representing numbers using only 0 and 1.

1 Choose the correct answer from the following:

- Secondary information comes from
a. research b. experiments
c. third parties d. surveys
- Cross-checking means comparing information to ensure
a. beauty b. privacy
c. speed d. accuracy
- Using a smartphone while walking causes
a. focus b. safety
c. accidents d. rest
- Cybercrime means using computers or networks for activities.
a. criminal b. business
c. social d. artistic
- Limiting copyright to allow use without permission applies in cases.
a. illegal b. exceptional
c. regular d. private

2 Put (✓) or (x) in front of each of the following sentences:

- Social media has no influence on communication between individuals. ()
- Excessive internet use that harms daily life is known as internet addiction. ()
- Logical operations are performed using numbers 0 and 1. ()
- In computers, "0" is processed as true and "1" as false. ()
- Mass communication means sending information to a few individuals only. ()

3 Complete the following with the suitable words in brackets:

(CPU (central processing unit) – Secondary memory – carry, carry – Four Basic Items)

- Name, address, date of birth, and gender are known as the
- A full adder circuit considers from the lower bit and to the higher bit.
- A policy that defines how companies manage personal data is called a
- The combination of the control unit and arithmetic unit is known as the
- Memory used for long-term storage, such as hard disks or SSDs, is called

4 Write the scientific concept for each of the following:

- 1- The unit that performs all mathematical and logical calculations.
- 2- The device invented by Bell in 1876 that allows voice communication over long distances.
- 3- The physical devices of a computer, such as CPU, memory, and storage.
- 4- Programs and data that operate on computer hardware.
- 5- The first experimental broadcast conducted in 1906 in the United States.



Al-Faez Exercises

Test (2)

1 Choose the correct answer from the following:

1. Media are tools for
 - a. eating
 - b. traveling
 - c. conveying information
 - d. storing energy
2. Recording media are used for
 - a. talking
 - b. recording
 - c. painting
 - d. speaking
3. Identity theft involves stealing someone's
 - a. ideas
 - b. IDs or passwords
 - c. photos
 - d. comments
4. Leakage of personal information means revealing data to
 - a. friends
 - b. teachers
 - c. third parties
 - d. family
5. Reproduction for private use is an example of a copyright
 - a. violation
 - b. limitation
 - c. license
 - d. exception

2 Put (✓) or (x) in front of each of the following sentences:

- 1- A logic circuit is designed to perform arithmetic operations only. ()
- 2- A truth table shows all possible combinations of inputs and outputs for a logic circuit. ()
- 3- An AND gate outputs 1 if at least one input is 1. ()
- 4- An OR gate outputs 1 only when all inputs are 1. ()
- 5- Newspapers and magazines are examples of mass communication. ()

5 Complete the following with the suitable words in brackets:

- (copyright – true, false – information society – precedents – Input devices)
1. Information ethics refers to the foundational concepts and attitudes necessary for proper behavior in the
 2. Sharing photos or videos without permission violates
 3. Privacy and image rights are recognized through court
 4. Devices that take information from external sources are called
 5. In computers, "1" is processed as and "0" as

4 Write the scientific concept for each of the following:

1. The right of an individual to protect personal information they do not want others to know.
2. A document or statement that explains how a company manages personal data.
- 3- Software necessary for operating the hardware.
- 4- A program that controls communication between a connected device and software.
- 5- The combination of the control unit and arithmetic unit.



Al-Faez Exercises

Test (3)

1 Choose the correct answer from the following:

1. Media literacy is the ability to
 - a. read books
 - b. interpret media
 - c. play music
 - d. design posters
2. Data are represented using
 - a. numbers
 - b. books
 - c. colors
 - d. signals
3. Disinformation and rumors can lead to
 - a. truth
 - b. silence
 - c. safety
 - d. confusion
4. Information ethics involves the foundational necessary for proper behavior in the information society.
 - a. laws
 - b. devices
 - c. concepts
 - d. games
5. Using part of another's work in your own is called
 - a. quotation
 - b. citation
 - c. adaptation
 - d. translation

Final tests

Put (✓) or (x) in front of each of the following sentences:

- 1- A NOT circuit is also called an inverter circuit. ()
- 2- A half adder circuit adds multi-digit numbers. ()
- 3- The internet was originally created for entertainment purposes. ()
- 4- The development of communication methods shows human progress in sharing information. ()
- 5- Asynchronous communication means both parties must be present at the same moment. ()

Complete the following with the suitable words in brackets:

(spread – laws – logic circuit – Output devices – application)

1. Information ethics applies regardless of the presence or absence of
2. Information on the internet is easily and tends not to disappear.
3. Devices that display or output information from the computer are called
4. Word processing and spreadsheet programs are examples of software.
5. A is a circuit designed to perform logical operations.

Write the scientific concept for each of the following:

- 1- The process of receiving and exchanging information between people.
- 2- The right preventing others from using one's image or appearance without permission.
- 3- The right protecting the economic interests of famous people in their likeness.
- 4- A type of system software responsible for managing tasks, memory, and files.
- 5- The communication type in which the sender and receiver are directly face-to-face.



Al-Faez Exercises

Test (4)

Choose the correct answer from the following:

1. Information holds
a. form
b. time
c. weight
d. meaning
2. Information is used for
a. decoration
b. games
c. decision-making
d. translation
3. Information ethics applies regardless of the presence or absence of
a. rules
b. media
c. rights
d. laws

4. Internet information spreads easily and tends
a. not to disappear
b. to increase
c. to disappear
d. to stop
5. In quotation, your own work must be
a. subordinate
b. shorter
c. primary
d. secondary

Put (✓) or (x) in front of each of the following sentences:

- 1- A half adder is composed of AND, OR, and NOT gates. ()
- 2- A full adder circuit ignores the carry from the lower bit. ()
- 3- In ancient times, people used signal fires and drums to convey information. ()
- 4- Writing was used for communication before signal fires. ()
- 5- Conversations and presentations are examples of indirect communication. ()

Complete the following with the suitable words in brackets:

(1, 1 - truth table - privacy - online bullying - Peripheral devices)

1. Revealing another person's personal information online violates their
2. Posting insulting comments about others is a form of
3. Devices like keyboard, mouse, and printer are called
4. A shows all possible combinations of inputs and outputs for a logic circuit.
5. An AND gate outputs only when all inputs are

Write the scientific concept for each of the following:

1. A circuit designed to perform logical operations.
2. A table that shows all possible combinations of inputs and outputs for a logic circuit.
3. The type of communication where one sender interacts with one receiver.
4. A method that requires prior consent before collecting user data.
5. Numbers such as passport, national ID, or driver's license numbers used to identify individuals.



Al-Faez Exercises

Test (5)

Choose the correct answer from the following:

1. Information has no
a. form
b. color
c. limit
d. owner

- Put (✓) or (x) in front of each of the following sentences:

- ⑤ Complete the following with the suitable words in brackets:

1. Geotagging refers to embedding latitude, and information in photos or videos.
2. False or baseless information spread intentionally is called
3. A program that controls communication between a device and software is called a
4. A video sharing platform allows users to and watch videos.
5. Task management, memory management, and file management are functions of the

1. Data related to a natural person who can be identified directly or indirectly.
2. The four main items of personal data: name, address, date of birth, and gender.
- 3- A tool for sending and receiving text-based messages over the Internet.
4. A circuit that outputs the opposite result of the input.
- 5- A tool that allows real-time conversation while viewing the other person's video.

Final tests

Test (6)

1. Reproducibility means information can be
 - a. deleted
 - b. hidden
 - c. copied
 - d. limited
2. Propagation means information can be easily
 - a. destroyed
 - b. reduced
 - c. hidden
 - d. spread
3. Posting comments that insult others is a form of
 - a. cybercrime
 - b. friendship
 - c. privacy protection
 - d. online bullying
4. Geotagging means adding data to photos or videos.
 - a. name
 - b. color
 - c. location
 - d. time
5. Devices such as keyboard, mouse, and printer belong to.
 - a. Hardware
 - b. Interface
 - c. Peripheral devices
 - d. Memory

- 1- Analog quantities include measurements such as mass, time, and temperature. ()
- 2- Convenience refers to the difficulty of using internet tools for communication. ()
- 3- Recordability means that internet communication leaves no trace or record. ()
- 4- Audio and images can be represented in binary form in computers. ()
- 5- Digital data cannot be edited once stored. ()

(connect – conditions - internet addiction - Android OS – permission)

1. Social media are services that allow individuals to with each other online.
2. Spending too much time online to the point it affects daily life is known as
3. A Creative Commons License shows the for using copyrighted works.
4. Exceptions to copyright allow use without obtaining from the copyright holder.
5. Examples of operating systems include Windows, macOS, and

Final tests

4 Write the scientific concept for each of the following:

1. A circuit that outputs 1 only when all inputs are 1.
2. The foundational concepts and attitudes necessary for proper behavior in the information society.
3. The embedding of latitude and longitude data in photos and videos taken with smartphones.
4. A circuit representing the addition of single-digit numbers, composed of AND, OR, and NOT gates.
5. A tool for sending and receiving text-based messages over the internet.

**Al-Faez Exercises****Test (7)****1 Choose the correct answer from the following:**

1. Information spreads through
a. games
c. machines
b. schools
d. mass media
2. Knowledge is information that has been
a. analyzed
c. printed
b. deleted
d. moved
3. Disinformation refers to information spread intentionally.
a. true
c. false
b. useful
d. secret
4. Social media are online platforms that allow individuals to
a. sleep
c. trade
b. connect
d. read
5. The unit that performs calculations.
a. Arithmetic unit
c. Memory unit
b. Control unit
d. Input unit

2 Put (✓) or (x) in front of each of the following sentences:

- 1- The sampling theorem states that the sampling frequency must exceed twice the highest frequency in the original waveform. ()
- 2- It is difficult to combine various types of media in digital form. ()
- 3- Binary represents numbers using only two digits: 0 and 1. ()
- 4- In computers, only numerical information is represented in binary form. ()
- 5- Lower sampling frequency and bit depth produce better sound quality. ()

3 Complete the following with the suitable words in brackets:

(Hardware – credit – Software – Protection – application)

- 1- The "BY" mark means giving to the creator.
- 2- Copyright aims to contribute to cultural development by ensuring the fair use of works and the of rights.
- 3- Software that operates on top of system software is called software.
- 4- The physical devices of a computer, such as CPU, memory, and storage.
- 5- Programs and data that operate on computer hardware.

4 Write the scientific concept for each of the following:

1. The process of converting digital data into analog data.
2. A situation where internet use becomes excessive and interferes with daily life.
3. The act of sharing another person's images or videos without permission, violating their rights.
4. A phenomenon transmitted through the vibration of air.
5. The method of representing numbers using two digits, 0 and 1.

**Al-Faez Exercises****Test (8)****1 Choose the correct answer from the following:**

1. Primary information is obtained through
a. reading
c. copying
b. guessing
d. experience
2. The unit used to measure frequency is
a. Volt
c. Hertz
b. Bit
d. Byte
3. Spending too much time online to the point it affects daily life is called
a. addiction
c. privacy
b. learning
d. sharing
4. The main components that together form the CPU.
a. Input and output
c. Memory and storage
b. Control and arithmetic
d. Keyboard and monitor
5. After writing was developed, messages were written on
a. Metal
c. Paper
b. Stone
d. Wood

Final tests

2 Put (✓) or (x) in front of each of the following sentences:

1. Cloud storage is an example of expression media. ()
2. Digital data cannot be edited once stored. ()
3. Leakage of personal information means keeping private data safe. ()
4. Analog quantities include measurements such as mass, time, and temperature. ()
5. Sound is transmitted through the vibration of air. ()

3 Complete the following with the suitable words in brackets:

(exceptions – carry – Frequency – source – 1, 1)

- 1- Reproduction for private use and reproduction within educational institutions are examples of copyright
- 2- The of the quoted material must always be clearly specified.
- 3- An OR gate outputs if at least one of the inputs is
- 4- A full adder circuit considers from the lower bit and to the higher bit.
- 5- The number of waves contained in one second is called

4 Write the scientific concept for each of the following:

1. False or baseless information intentionally spread to mislead people.
2. The disclosure of confidential personal data to unauthorized individuals or groups.
3. Software necessary for operating the hardware.
4. The process of dividing the time axis into intervals and extracting wave heights.
5. A type of system software responsible for managing tasks, memory, and files.



Al-Faez Exercises

Test (9)

1 Choose the correct answer from the following:

- 1- Memory used for temporary data storage.
 - a. Main memory
 - b. Secondary memory
 - c. USB
 - d. SSD
- 2- Device used for long-term data storage.
 - a. RAM
 - b. Mouse
 - c. CPU
 - d. Hard disk

3- Basic information in ancient times was conveyed by

- a. Writing
- b. Radio
- c. Electricity
- d. Signal fires

4- Drums were used in ancient times for

- a. Music
- b. Celebration
- c. communication
- d. Transportation

5- The unit used to measure frequency is

- a. Volt
- b. Bit
- c. Hertz
- d. Byte

2 Put (✓) or (x) in front of each of the following sentences:

1. Information has a physical form like objects. ()
2. Information provides meaning or value for the recipient. ()
3. Posting false rumors online helps maintain a safe digital environment. ()
4. Respecting others' privacy and rights is part of information ethics. ()
5. Audio and images can be represented in binary form in computers. ()

3 Complete the following with the suitable words in brackets:

(inverter, opposite – necessity – quotation – Encoding – Analog)

- 1- Quotation must be done only when there is a real for it.
- 2- Quoted material must be clearly identifiable by enclosing it in marks.
- 3- A NOT circuit, also called an circuit, outputs the result of the input.
- 4- Quantities that can be measured continuously and with fine precision are called:
- 5- The process of expressing quantized values in binary form is called

4 Write the scientific concept for each of the following:

1. The use of computers and networks to commit illegal acts.
2. The act of pretending to be another person or organization to steal IDs or passwords.
3. A program that controls communication between a connected device and software.
4. The process of converting analog data into digital data.
5. The process of converting sampled wave heights to the nearest level on the vertical scale.



1 Choose the correct answer from the following:

- Device that inputs information from outside the computer.
 - Scanner
 - Display
 - Printer
 - CPU
- Interface widely used to connect keyboards and printers.
 - HDMI
 - USB
 - Ethernet
 - Wi-Fi
- Hardware refers to
 - Programs
 - Data
 - Devices
 - Drivers
- Software necessary for operating hardware is called
 - System software
 - Application
 - Memory
 - Storage
- The first computer network experiment supported by the U.S. Department of Defense was called
 - Internet
 - Telegraph
 - Wi-Fi
 - ARPANET

2 Put (✓) or (x) in front of each of the following sentences:

- Information can be completely erased after creation. ()
- Persistence means information continues to exist once created. ()
- Responsible online behavior helps create a healthy information society. ()
- Information ethics provides the concepts and attitudes needed for correct behavior in the information society. ()
- Monaural playback uses two different signals. ()

3 Complete the following with the suitable words in brackets:

- (per second - Digital data - human life - Image Rights - single-digit)
- Data may be shared without consent when necessary for the protection of or property.
 - Data amount is calculated as sampling frequency $\times$ Quantization bit depth $\times$ Number of channels.
 - Preventing others from using one's face or appearance without permission is part of:
 - A half adder circuit represents the addition of numbers.
 - Data represented in digital form is referred to as

1 Write the scientific concept for each of the following:

- The number of frames displayed per second in a video.
- A phenomenon transmitted through the vibration of air.
- The method used to digitize analog audio data by converting it into binary code.
- The electronic medium that creates the illusion of movement by displaying a series of still images in succession.
- The process of converting the brightness of each pixel into numerical levels.



1 Choose the correct answer from the following:

- Interface used to transmit video and audio through one cable.
 - Ethernet
 - USB
 - HDMI
 - SSD
- Communication standard used in wired LANs.
 - Ethernet
 - USB
 - HDMI
 - Wi-Fi
- Operating system (OS) manages
 - Files, tasks, memory
 - Devices only
 - Programs only
 - Drivers only
- Software that works on top of system software is
 - Driver
 - Application software
 - CPU
 - Storage
- The first experimental radio broadcast was conducted in
 - 1906
 - 1928
 - 1837
 - 1876

2 Put (✓) or (x) in front of each of the following sentences:

- Propagation makes information difficult to spread. ()
- Mass media such as newspapers and TV help spread information. ()
- The application of information ethics depends on the existence of laws. ()
- Information on the internet spreads easily and rarely disappears completely. ()
- The three primary colors of light are cyan, magenta, and yellow. ()

3 Complete the following with the suitable words in brackets:

(Right to Privacy – same – laws – AND, OR – altered)

1. Sharing personal information is allowed when it is based on and regulations.
2. A half adder is composed of,, and NOT gates.
3. The right to keep private information secret is called the
4. Quoted material must not be or changed in any way.
5. The "SA" mark means publishing adaptations under the license terms as the original.

4 Write the scientific concept for each of the following:

1. The process of reducing the amount of data while preserving its content.
2. The process of organizing and creatively expressing information to convey the intended message correctly to the target audience.
3. The process of restoring compressed data to its original state.
4. The smallest unit that composes an image and forms its structure.
5. The process of dividing an image into pixels and extracting representative brightness.



Al-Faez Exercises

Test (12)

1 Choose the correct answer from the following:

- 1- A device driver controls communication between
 - a. Programs and users
 - b. OS and CPU
 - c. Memory and storage
 - d. Devices and software
- 2- Examples of mass communication include
 - a. Letters
 - b. Radio and television
 - c. Telephone
 - d. Morse code
- 3- The movable-type printing press was invented by
 - a. Bell
 - b. Gutenberg
 - c. Morse
 - d. Marconi
- 4- The term "BBS" stands for
 - a. Basic Blogging System
 - b. Bulletin Board System
 - c. Browser-Based Service
 - d. Binary Broadcasting Software

5- The main function of a BBS is to allow users to

- a. make voice calls
- b. design websites
- c. post and read messages
- d. edit videos

2 Put (✓) or (x) in front of each of the following sentences:

1. Knowledge is formed when information is analyzed and systematized. ()
2. Primary information is obtained from other people's experiences. ()
3. Once information is deleted from the internet, it completely vanishes forever. ()
4. Sharing copyrighted materials without permission is a violation of others' rights. ()
5. Mixing the three primary colors of light increases brightness and moves toward white. ()

3 Complete the following with the suitable words in brackets:

(Encoding – Publicity Rights – Numbers – Secondary memory – CPU (central processing unit))

1. The right protecting the economic interests of celebrities is called
2. such as passport or national ID numbers are called Personal Identification Codes.
3. The combination of the control unit and arithmetic unit is known as the
4. Memory used for long-term storage, such as hard disks or SSDs, is called
5. represents a string with character codes, while the opposite process is decoding.

4 Write the scientific concept for each of the following:

1. The smallest unit that composes an image and forms its structure.
2. The degree of fineness of pixels during the sampling process, measured in dpi.
3. A compression method that assigns shorter bit sequences to frequently occurring characters.
4. Conveying the intended information simply from within a large amount of data.
5. A pictorial symbol designed to convey information without using words.



1 Choose the correct answer from the following:

- 1- The "BY" mark in Creative Commons stands for
 - a. business use
 - b. by creator
 - c. basic rights
 - d. credit to creator
- 2- The "NC" mark means the work cannot be used for purposes.
 - a. commercial
 - b. private
 - c. legal
 - d. public
- 3- Mobile phone service began in the United States in
 - a. 1837
 - b. 1895
 - c. 1969
 - d. 1946
- 4- Mass communication means sending information to
 - a. One person
 - b. A small group
 - c. A large number of people
 - d. Machines
- 5- The abbreviations "To", "CC", and "BCC" are commonly used in
 - a. Blogs
 - b. Video calls
 - c. Social media
 - d. Email communication

2 Put (✓) or (x) in front of each of the following sentences:

1. Experimental reports and survey results are examples of primary information. ()
2. Secondary information is obtained directly through personal research. ()
3. Subtractive color mixing is used in color printers. ()
4. Publishing someone's personal data without consent respects their privacy. ()
5. Online bullying includes posting insulting or defamatory comments about others. ()

3 Complete the following with the suitable words in brackets:

(2 – compliance - Output devices - Peripheral devices - Prior Approval System)

1. Companies must obtain a license from the Personal Data Protection Center to ensure with the law.
2. The system where data is not collected unless prior consent is given is called the
3. Devices that display or output information from the computer are called

4. Devices like keyboard, mouse, and printer are called
5. A carry is generated in binary addition when the sum reaches

4 Write the scientific concept for each of the following:

- 1- A representation of a program's content on a computer or smartphone depicted through images or illustrations.
- 2- The degree of fineness of pixels during the sampling process, measured in dpi.
- 3- A compression method in which the original data cannot be completely restored.
- 4- Visually representing information to make it more understandable.
- 5- The smallest unit that composes an image and forms its structure.



1 Choose the correct answer from the following:

- 1- The "ND" mark requires no of the original work.
 - a. copy
 - b. sale
 - c. use
 - d. change
- 2- The "SA" mark requires adaptations to use the license terms.
 - a. same
 - b. new
 - c. limited
 - d. old
- 3- The inventor of the telephone was
 - a. Bell
 - b. Morse
 - c. Marconi
 - d. Edison
- 4- The wireless telegraph was invented by
 - a. Morse
 - b. Marconi
 - c. Bell
 - d. Gutenberg
- 5- Email allows users to send messages to several recipients using
 - a. Attachments
 - b. Spam filters
 - c. Firewalls
 - d. Broadcast capability

2 Put (✓) or (x) in front of each of the following sentences:

1. Cross-checking helps ensure accuracy and reliability of information. ()
2. Media are tools for storing food and materials. ()
3. Usability measures how enjoyable a product looks to users. ()
4. Geotagging in photos can reveal the location of the photographer. ()

Al-Faez Exercises

1 Choose the correct answer from the following:

- The "BY" mark in Creative Commons stands for
a. business use
b. by creator
c. basic rights
d. credit to creator
- The "NC" mark means the work cannot be used for purposes.
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- Devices like keyboard, mouse, and printer are called
- A carry is generated in binary addition when the sum reaches

4 Write the scientific concept for each of the following:

- A representation of a program's content on a computer or smartphone depicted through images or illustrations.
- The degree of fineness of pixels during the sampling process, measured in dpi.
- A compression method in which the original data cannot be completely restored.
- Visually representing information to make it more understandable.
- The smallest unit that composes an image and forms its structure.

Al-Faez Exercises

Test (14)

1 Choose the correct answer from the following:

- The "ND" mark requires no of the original work.
a. copy
b. sale
c. use
d. change
- The "SA" mark requires adaptations to use the license terms.
a. same
b. new
c. limited
d. old
- The inventor of the telephone was
a. Bell
b. Morse
c. Marconi
d. Edison
- The wireless telegraph was invented by
a. Morse
b. Marconi
c. Bell
d. Gutenberg
- Email allows users to send messages to several recipients using
a. Attachments
b. Spam filters
c. Firewalls
d. Broadcast capability

2 Put (✓) or (x) in front of each of the following sentences:

- Cross-checking helps ensure accuracy and reliability of information. ()
- Media are tools for storing food and materials. ()
- Usability measures how enjoyable a product looks to users. ()
- Geotagging in photos can reveal the location of the photographer. ()

5. Removing geotags from photos prevents others from knowing your location. ()

3 Complete the following with the suitable words in brackets:

(0, and 1 – Personal Information – law – single-digit – Input devices)

- Information like race, creed, or medical history is known as Special Care-Required
- The that regulates the handling of personal information is called the Act on the Protection of Personal Information.
- Devices that take information from external sources are called
- A half adder circuit represents the addition of numbers.
- Logical operations are performed using combinations of the numbers

4 Write the scientific concept for each of the following:

- The value level representing the intensity of color per pixel.
- A compression method that replaces sequences of identical symbols with a numerical value representing their length.
- Visually representing information to make it more understandable.
- The process of expressing quantized values in binary numbers (0 and 1).
- A system for transferring information between humans and devices.



Al-Faez Exercises

Test (15)

1 Choose the correct answer from the following:

- All Creative Commons marks are used to guide of works.
 - usage
 - destruction
 - creation
 - translation
- Copyright aims to promote cultural development through fair use and
 - privacy
 - sharing
 - protection of rights
 - quotation
- The Morse telegraph was invented by
 - Bell
 - Marconi
 - Morse
 - Gutenberg
- The telephone was invented in
 - 1876
 - 1837
 - 1895
 - 1946

- 5- The main purpose of Internet communication tools is to

- play games
- store files
- share and exchange information
- design websites

2 Put (✓) or (x) in front of each of the following sentences:

- Expression media include text, images, and audio. ()
- Transmission media are used to send and communicate information. ()
- Usability measures how enjoyable a product looks to users. ()
- Disinformation refers to intentionally spreading false or baseless information. ()
- Social media platforms allow people to connect and share content online. ()

3 Complete the following with the suitable words in brackets:

(NOT – directly – consent – Control unit – Main memory)

- Personal information refers to any data related to a natural person who can be identified or indirectly.
- Personal information cannot be provided to a third party without the individual's
- The unit that executes instructions and coordinates all computer operations.
- Memory used for temporarily storing programs and data.
- A half adder is composed of AND, OR and gates.

4 Write the scientific concept for each of the following:

- The method of representing colors by combining red, green, and blue light.
- A compression method that assigns shorter bit sequences to frequently occurring characters.
- A representation of a program's content on a computer or smartphone depicted through images or illustrations.
- A system for transferring information between humans and devices.
- A number system that uses digits 0-9 and letters A-F.

Unit seven - Lesson 3

- (1) ✓ (2) x (3) x (4) ✓ (5) x (6) x (7) ✓
- (8) x (9) ✓ (10) x
- (1) 0, and 1 (2) true, false
- (3) logic circuit
- (4) truth table (5) 1, 1

Test 1 - November

- (1) a (2) d (3) d (4) c (5) b
- (1) ✓ (2) x (3) ✓ (4) x (5) ✓
- (1) CPU (central processing unit)
- (2) Secondary memory
- (3) Input devices
- (4) Output devices
- (5) Peripheral devices
- (1) D/A conversion
- (2) Kilobyte (KB)
- (3) Hexadecimal (4) Data
- (5) A/D conversion (digitization)

Test 2 - November

- (1) a (2) a (3) c (4) d (5) c
- (1) x (2) ✓ (3) x (4) ✓ (5) ✓
- (1) application
- (2) driver (3) OS
- (4) Android OS
- (5) application
- (1) Binary to Decimal Conversion
- (2) User interface (UI)
- (3) Decimal to Binary Conversion
- (4) Analog data
- (5) Digital data

Test 3 - November

- (1) d (2) a (3) c (4) b (5) d

- (1) x (2) ✓ (3) ✓ (4) x (5) ✓
- (1) 1, 1 (2) inverter, opposite
- (3) single-digit (4) AND, OR
- (5) carry, carry
- (1) Binary (2) Hexadecimal number
- (3) Decimal (4) Nibble (5) Binary

Final exams

Final exam (1)

- (1) c (2) d (3) c (4) a (5) b
- (1) x (2) ✓ (3) ✓ (4) x (5) x
- (1) Four Basic Items (2) carry, carry
- (3) Privacy Policy
- (4) CPU (central processing unit)
- (5) Secondary memory
- (1) Arithmetic unit (2) Telephone
- (3) Hardware (4) Software
- (5) Radio

Final exam (2)

- (1) c (2) b (3) b (4) c (5) d
- (1) x (2) ✓ (3) x (4) x (5) ✓
- (1) information society (2) copyright
- (3) precedents (4) Input devices
- (5) true, false
- (1) Right to Privacy (2) Privacy Policy
- (3) System software (4) Device driver
- (5) CPU (central processing unit)

Final exam (3)

- (1) b (2) a (3) d (4) c (5) a
- (1) ✓ (2) x (3) x (4) ✓ (5) x
- (1) laws (2) spread (3) Output devices
- (4) application (5) logic circuit
- (1) Communication (2) Image Rights

- (3) Publicity Rights
- (4) Operating system (OS)
- (5) Direct communication

Final exam (4)

- (1) d (2) c (3) d (4) a (5) c
- (1) ✓ (2) x (3) ✓ (4) x (5) x
- (1) privacy (2) online bullying
- (3) Peripheral devices
- (4) truth table (5) 1, 1
- (1) Logic circuit (2) Truth table
- (3) One-to-one communication
- (4) Prior Approval System
- (5) Personal Identification Codes

Final exam (5)

- (1) a (2) b (3) d (4) a (5) a
- (1) x (2) ✓ (3) ✓ (4) ✓ (5) x
- (1) longitude (2) disinformation
- (3) driver (4) share (5) OS
- (1) Personal Information
- (2) Four Basic Items
- (3) Email (Electronic mail)
- (4) NOT circuit (Inverter circuit)
- (5) Video call

Final exam (6)

- (1) c (2) d (3) d (4) c (5) c
- (1) ✓ (2) x (3) x (4) ✓ (5) x
- (1) connect
- (2) internet addiction
- (3) conditions
- (4) permission
- (5) Android OS
- (1) AND gate
- (2) Information ethics

- (3) Geotagging
- (4) Half adder circuit
- (5) Email (Electronic mail)

Final exam (7)

- (1) d (2) a (3) c (4) b (5) a
- (1) ✓ (2) x (3) ✓ (4) x (5) x
- (1) credit
- (2) Protection
- (3) application
- (4) Hardware (5) Software
- (1) D/A conversion
- (2) Internet addiction
- (3) Copyright infringement
- (4) Sound
- (5) Binary

Final exam (8)

- (1) d (2) c (3) a (4) b (5) c
- (1) x (2) x (3) x (4) ✓ (5) ✓
- (1) exceptions (2) source (3) 1, 1
- (4) carry
- (5) Frequency
- (1) Disinformation
- (2) Leakage of personal information
- (3) System software
- (4) Sampling
- (5) Operating system (OS)

Final exam (9)

- (1) a (2) d (3) d (4) c (5) c
- (1) x (2) ✓ (3) x (4) ✓ (5) ✓
- (1) necessity
- (2) quotation
- (3) inverter, opposite (4) Analog
- (5) Encoding

Programming and AI

- ➊ (1) Cybercrime (2) Identity theft
- (3) Device driver
- (4) A/D conversion (digitization)
- (5) Quantization

Final exam (10)

- ➊ (1) a (2) b (3) c (4) a (5) d
- ➋ (1) x (2) ✓ (3) ✓ (4) ✓ (5) x
- ➌ (1) human life (2) per second
- (3) Image Rights (4) single-digit
- (5) Digital data
- ➍ (1) Frame rate (2) Sound
- (3) Pulse Code Modulation (PCM)
- (4) Video
- (5) Quantization

Final exam (11)

- ➊ (1) c (2) (3) a (4) b (5) a
- ➋ (1) x (2) ✓ (3) x (4) ✓ (5) x
- ➌ (1) laws (2) AND, OR
- (3) Right to Privacy
- (4) altered (5) same
- ➍ (1) Compression
- (2) Information design
- (3) Decompression
- (4) Pixel (5) Sampling

Final exam (12)

- ➊ (1) d (2) b (3) b (4) b (5) c
- ➋ (1) ✓ (2) x (3) x (4) ✓ (5) ✓
- ➌ (1) Publicity Rights (2) Numbers
- (3) CPU (central processing unit)
- (4) Secondary memory
- (5) Encoding
- ➍ (1) Pixel (2) Resolution
- (3) Huffman coding (4) Abstraction

(5) Pictogram

Final exam (13)

- ➊ (1) d (2) a (3) d (4) a (5) d
- ➋ (1) ✓ (2) x (3) (4) x (5) ✓
- ➌ (1) compliance
- (2) Prior Approval System
- (3) Output devices
- (4) Peripheral devices (5) 2
- ➍ (1) Icon (2) Resolution
- (3) Lossy compression
- (4) Visualization (5) Pixel

Final exam (14)

- ➊ (1) d (2) a (3) a (4) b (5) d
- ➋ (1) ✓ (2) x (3) x (4) ✓ (5) ✓
- ➌ (1) Personal Information (2) law
- (3) Input devices
- (4) single-digit (5) 0, and 1
- ➍ (1) Gradation
- (2) Run-length encoding
- (3) Visualization (4) Encoding
- (5) User interface (UI)

Final exam (15)

- ➊ (1) a (2) c (3) c (4) a (5) c
- ➋ (1) ✓ (2) (3) x (4) ✓ (5) ✓
- ➌ (1) directly (2) consent
- (3) Control unit
- (4) Main memory (5) NOT
- ➍ (1) Additive color mixing
- (2) Huffman coding (3) Icon
- (4) User interface (UI)
- (5) Hexadecimal

Best wishes for success

كيفية طباعة صفحات معينة من ملف معين مثلا ازاي نطبع الصفحات من صفحة 4 الى صفحة 9

